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Business Law in the Public Schools.

By JAMES BUCKHAM, Boston.

Not long ago a wave of public excitement and indignation swept thru a New England city, owing to the discovery, published with substantiating figures in one of the city newspapers, that municipal finances were in a very bad condition, owing to the incompetency, rather than dishonesty, of the city government. A reporter, in a personal interview with a wide-awake young business man who had recently been elected to the board of aldermen, obtained from him the following somewhat remarkable statement:

"The trouble is due entirely to ignorance, not to any wilful mismanagement or dishonest intent on the part of the city government. The root of the matter is this: We, who have been entrusted with the management of your municipal affairs are not fitted by education to administer our trust wisely. We have involved the city in difficulties by our ignorant blunders.

"What we all lack is practical legal training—that is to say, that fundamental, everyday knowledge of the common law in its application to financial affairs which a public officer ought to possess. Strangely enough, there is not at present a single lawyer on the board; but I am by no means sure that, if there had been one, his advice would have prevailed over the ignorant confidence of the majority in certain matters in which we are now completely tied up. I am willing that you should state it as my conviction that the average business man and the average professional man, outside of the legal profession, have no business to be connected with municipal government. The most essential thing has been left out of their education from boyhood—I mean a thoro understanding of the rudiments of business law. If these rudiments were taught, as they might easily be, in connection with a common school education, what a world of blunders the average citizen would be delivered from! The business man, thus equipped, would be the ideal man, I think, for an alderman or councilman. But in his present condition of almost childish ignorance of the commonest points of business law, he is worse than useless as a public administrator. His enterprise and progressiveness only lead him into blunders of the most disastrous kind, so that, while he believes himself earnestly and honestly working for the financial good of his constituents, he is only involving them in mistakes from which escape is both difficult and expensive. The sole trouble with our city government for the past ten years has been that our affairs were conducted by well-meaning ignoramuses, who have been allowed to grow up to manhood without knowing as much as a lawyer's office boy about the most rudimentary legal principles and processes applied to ordinary business transactions."

Here is significantly and forcibly indicated one of the most serious and amazing deficiencies in the present curriculum of the American public school. That our boys and girls should be permitted to grow up to manhood and womanhood in absolute and utter ignorance of the most practical requirements of that practical life upon which they are so soon to enter, is simply astounding. Consider how we drill into them history, political economy, constitutional government, and all those larger and

remoter sciences derived from the study of the communal life of the race, but teach them not a word of those immediate and practical relations of citizenship which are bound up with the common law.

To illustrate: We graduate a high school pupil who can glibly recite the causes and results of the French revolution, but would be as nonplussed as a child if asked to define the obligations and compensations of an American citizen summoned as a witness in a jury trial—one of the first things that might happen to him in practical life. Again, our high school graduate may be excellently grounded in the broad principles of political economy, and know absolutely nothing of the laws governing private taxes, of what kinds they are, how raised, apportioned, and collected. Yet he may be just coming of age and about to assume the control of inherited property. All he can do, when confronted by such responsibilities, is to go to a lawyer and pay him whatever fee he chooses to ask for information that ought to be furnished to every schoolboy before his second year in the high school.

I remember when I was graduated from the high school in my native town, that I was "green" to the point of shame and reticence on the most familiar obligations of the embryo citizen. I did not know whether a man has to apply for a license to do business, and if so, when and how. I did not know what a "lien" meant, or the legal status of a note in business, or what distinguishes a second mortgage from a first mortgage, or what is implied in a "power of attorney," or how to give it, or how to draw up the simplest legal paper, or assign a mortgage, or make an affidavit. All these things were Greek to me—and worse than Greek, for I knew that pretty well—and I had to learn them by humiliatingly slow experience.

It is ignorance of this kind prolonged into business and public life that causes administrators of public affairs to make mistakes of the most absurd and disastrous character. A schoolboy, properly instructed in the fundamentals of business law, would be proof against such blunders as have been repeatedly made by the municipal administrators of intelligent communities. As matters now stand, what may be called the lay citizen, from a legal standpoint, sustains about the same relation to the well informed lawyer that the old-time worshiper sustained to the priest or clergyman—a relation, namely, of utter ignorance and dependence. Ninety-nine men out of a hundred to-day go to a lawyer to have offices performed for them which are really as simple as saying one's prayers, and as essentially personal and private and inexpensive, did one but realize it. In my opinion, the remedy for such primitive, childlike ignorance and dependence lies in early and progressive education in practical business law. The rudiments, the fundamentals of the common law, especially the common law in its application to business affairs, ought to be taught in our public schools. Can it be that the penny-wise, pound-foolish influence of lawyers upon school boards has anything to do with the present entire lack of such instruction? Is the lawyer afraid that, if our American youth get too much practical information in the schools, they will cease when they become citizens to come to him for marketable advice about the simplest matters of business law?

The Individual Child: His Education.

By SUPT. F. E. SPAULDING, Passaic, N. J.

Fundamental Principles and General Propositions.

(1) Educating is directing growth. Growth is from within, and is the fundamental principle of life; direction is imposed, directly or indirectly, from without, and is unavoidable and unceasing.

(2) It is a great mistake to think that education is limited to the school-room and to school hours, or even to these with the addition of the home and the church; and that the teacher, parents, and minister are the only educators. It is no less a mistake for the teacher to think that only the education of the school-room concerns her. Every part of the environment, animate or inanimate, conscious or unconscious, which exerts any influence on a child, affects that child's growth; and hence is a factor in that child's education. And there is one resultant, and only one of all the educational influences brought to bear on the child, viz.: the educated child,—be his education good or bad, efficient or inefficient. And since the efficiently educated child is the true aim of the teacher, it is unsafe to ignore any of the educational factors which are operating strongly, whether favorably or unfavorably, toward that end.

(3) Every child's education began generations and ages before that child entered the school-room. The stream of life which culminates in man has pushed its way upward thru many devious paths; certain of these, as a result of long and oft-repeated passage, under the conservative influence of heredity, have become the beaten roads of human progress, along which every individual must pass as he is educated from the single living cell up to the level of mature life; in technical language, ontogenesis recapitulates phylogenesis. This recapitulation is greatly abridged, but is a law of mental as well as physical growth; a law, however, which is subject to considerable modification in every individual, but to complete violation in none. So, in a very general way, the fundamental lines of the educational history of every individual are predetermined and may be foreknown and formulated in general laws; these laws are expressive of the periodicity and asymmetry of growth.

(4) Inward tendencies to grow, their kind, variety, strength, time of awakening and persistence, the following general laws in detail, are peculiar to each child. Each organ and function of the body and the soul has its nascent period, its period of maximum growth. This period of natural growth is the period when direction from without imposed upon the organ or function concerned is most effective. It is the teachable period. Hence, these growth periods must determine largely the duties of the teacher.

(5) Individuals alone are educated; a class is educated only as the individuals composing it are educated. Individuals alone can be taught; a class can be taught only as the individuals composing it are taught.

(6) The same environment acts differently on different children and elicits different reactions; conversely, different environments act differently on the same child and elicit different reactions from him. Hence, in either case, the resultant education is different. The teacher's function is that of furnishing and adapting environment to the child; the child's function is to grow. To perform her function successfully, the teacher must know thoroughly both the child and the environment and the mutual action and reaction developed.

(7) The success, the effectiveness of education, is measured by the plane of environment into which it elevates the child, and by the degree of efficiency with which the child is enabled to act and to react on that environment.

(8) Elementary public school education must be chiefly general and fundamental, conserving and developing those capacities for action and reaction on environment

which are prerequisites to the accomplishment of all worthy special ends. Among the most important of these capacities are the following: sound mental and bodily health, habits of cleanliness in body and mind, truthfulness in word and deed, modest self-reliance, self-control, a working knowledge of the various subjects of instruction, and expansive openness of mind and heart.

(9) True teaching is a profession, requiring for its exercise its own peculiar spirit and knowledge. As a preparation, which can never become too thoro, this profession demands:

(a) The point of view and knowledge which comes from a thoro genetic study of the educational history of the race in the broad biological sense, and, in the light of that history, especially of the phenomena of physical and mental growth of individuals.

(b) A knowledge of the important factors in the educational environment into which the children to be educated are born and destined to grow up, and especially of such peculiar environment as it is the duty of the school to furnish. The former includes both the leading laws and the highest ideals of modern society, and the chief conditions surrounding each child; the latter, the subjects of instruction, not only in themselves, but as educational instruments.

(c) An inexhaustible fund of high intellectual, moral, and spiritual ideals, and an abiding, contagious enthusiasm for their realization in human life.

In the intelligent practice of her profession, the teacher must

(a) Recognize her true function, viz.: that of doing her part toward directing most effectively and successfully the growth of each child entrusted to her; and conceive aright the real end of her service, viz., truly educated boys and girls, men and women.

(b) In the light of the general laws of growth; she must study carefully and constantly, the growth of each pupil.

(c) She must familiarize herself with the chief factors of the total educational environment of each pupil.

(d) She must adapt the environment of the school-room to the needs, not the desires, of each pupil, as determined not alone by that pupil's phase of development, but also by the out-of-school environment in which the pupil lives and the manner of his reaction to it.

(10) The true teacher has forty or fifty problems, each a child and his special environment, constantly confronting her and demanding daily quite as earnest thought as the lessons which are to be taught; indeed, the former are new every year or oftener, while the latter have long been more or less well known.

Each teacher's true function is primarily to contribute her part toward the best solution of these fifty child-environment problems; successful instruction in the facts of the various studies is only subsidiary to this end. Such instruction is indispensable, however, and simply because of this subsidiary relation.

Sympathetic study of individual children, from this broadly educational standpoint, is in itself a constant education to the one who makes it, which will serve more than anything else to counteract the narrowing, rutty tendencies of teaching lessons, and it cannot fail to contribute much to the true education of the child.

The Card Index Recording System.

Materials*:—The necessary materials for this system of records consist of specially prepared 5 x 3 guide and record cards, and neat desk-drawer boxes for filing the same.

Three forms of cards have been found to meet all requirements. First, guide cards in two colors, buff for boys, salmon for girls. They record date of birth, place of birth, nationality, parent's name, residence, date; date

*In a later number will be given suggestions concerning the purchase and cost of materials here indicated.

of registry and promotions with under the latter head spaces left for dates of promotions, for indicating from what grade to what grade, the name of teacher promoting, and remarks.

Second, sight and hearing cards, showing name, and with spaces for recording the condition of right and left ear with date, right and left eye with date, and the name of the recorder.

Third, miscellaneous records, showing name of pupil and teacher with date, and allowing for all sorts of miscellaneous remarks.

Purpose of the Record System.

This system in itself is a mere device intended to aid in the study of children and their environment from the educational standpoint. These card records are simply a means, not an end in themselves. The habit of recording what one sees of importance encourages further observation and reflection on that seen; it also furnishes a record for reference much more reliable than the memory, a record, too, which may be of great value to others than the recorder. The making of this particular record, along the lines to be outlined, fixes and holds the attention of the teacher where it should be, viz., on the individual child and on the chief factors of the individual child's education.

Explanations and Directions.

The guide cards should be filled out as far as possible at the beginning of the study of each child. Buff cards are for boys, salmon for girls. In the projection at the top, write the last name of the child; directly underneath and as close as possible write the given name, or names, in full. The boys' cards are to be placed in the box alphabetically, and behind them the girls' cards, also alphabetically. Behind the guide card of each child insert, as they are written all other cards referring to that child.

A guide and a sight-and-hearing card should be kept for each child and the required entries regularly made. Special directions will be given for making and recording the tests for sight and hearing. (See "Sense Organs").

The miscellaneous record cards are to be used at pleasure for recording anything that seems of sufficient importance. The teacher should be careful to place on each card her name, the name of the pupil, and the date of the record. In the blank space at the upper right hand corner may be written a word or two which will indicate the nature of the record, as "Headaches," "Outside Work," "Home Relations," etc.

When there is not room on the front of the card to complete a single connected record, the back of the card should be used too. Use a separate card for each distinct record.

When a child is transferred to another teacher, all his cards should be transferred too; better, when practicable, that the cards precede the child, so that the new teacher may be getting acquainted in advance, as it were.

In this way, the recorded history of the child grows constantly as he grows, and always accompanies or precedes him in his progress thru the schools. How invaluable to the high school teacher would be the real educational history of every entering pupil; a concrete record of the pupil's growth and of all the important factors favoring or hindering that growth from the kindergarten age on!

The Nature of the Factors to be Recorded.

All facts should concern either the child or his environment and seem to be of educational importance for that child. It must be left largely to the judgment of each teacher to determine what these facts are in each case. A fact of importance for the education of one child will, perhaps, be insignificant for that of another. The constant exercise of discriminating appreciation of educational influences here demanded will be itself of the highest educational value to the teacher. Merely for suggestion, a considerable list of classified character-

istics and factors generally of educational significance are appended.

Cautions.—This device may easily prove valueless, or even harmful, if misused. Some cautions for the teacher to bear in mind:—

1. Always remember that not the satisfaction of your curiosity, not the gathering of interesting information about your pupils, not even your own development, but the better education of every child entrusted to you, is the sole end and aim which justifies this work.

2. Avoid, if possible, the making of any record that will be very likely to prejudice against the child the teacher who receives it.

3. Determine yourself not to be prejudiced against any child on account of any records which may accompany him.

4. Never forget that children are growing, constantly changing, and that what is true of a child to-day may be far from true to-morrow. Records on any facts or characteristics subject to change should never be considered final.

5. Let your records be of facts, as far as possible of fundamental facts, not of apparent facts, much less of your personal feelings and impressions. Before making any record of a child's characteristics, favorable or un-



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President of the National Educational Association.

favorable, it is well to ask yourself whether that child is personally agreeable, disagreeable, or indifferent to you. Be very careful about recording off-hand that this child is "lazy," that that one "can't do anything with arithmetic," that a third one "has no memory," that another one "has no interest in his work and pays no attention to instruction," etc., etc. If these statements are true, the facts must be so patent that no written record of them is necessary. They are surface facts; you must go to the root of the matter. What is wanted is the causes of laziness, inability to do anything with arithmetic, poor memory, and failure to be interested in school work, and to give attention to it. There are always good causes underlying these manifestations and they can usually be discovered. These causes are well worth recording, but the record is only incidental; knowledge of the cause should usually enable the teacher to change the effect.

6. It is usually better that the children should not know that they are being studied in this way and that a record is being kept. Beside what the child cannot avoid revealing to a careful observer, an abundance of important facts can be gathered from conversation before and after school, at recess, and in many ways incidentally. This will help to bring teacher and pupil into closer relations. Children appreciate any genuine interest shown in them or in their affairs. If the teacher finds her children uncommunicative, it is probably because they distrust her, or feel that she does not sympathize with them, is not genuinely interested in them. To

really understand the child's life, the teacher must enter into it as another child.

7. Parents whose conception of education and of the function of the school differs radically from that here outlined, may not at once appreciate the importance of this kind of work; some may ridicule it, condemn it, even, feeling that the teacher is meddling with affairs that are "none of her business." But when the real purpose of this study is understood, when it is seen that the teacher is working simply in her professional capacity, with the highest welfare of each child at heart, the parent will be rare who will not be eager to render assistance. The cautious and wise teacher will know how to antagonize none and to secure the invaluable co-operation of many.

Such studies as this, consistently and generally carried out in a school system, will serve to bring home and school closer together, and will do more than anything else to educate the community up to higher and truer conceptions of education and of the function of the teacher and the school.

(To be continued.)

Country and City Boys.*

By WILLIAM H. HUSE, Manchester, N. H.

Are the country schools superior to the city schools in fitting boys and girls for life? Here are a few facts concerning country schools: The low wages paid teachers in this vicinity, averaging not much more than five or six dollars a week, gives them, after paying for board, about as much as they could earn doing housework. It is needless to say that such pay will not secure and keep the best teachers. With exceptions, of course, the country district teachers are young girls who have had little or no preparation for the work and less experience. The result is certainly not the best teaching. For the average pupil it is intellectual stagnation. There is a class, however, that profits by such instruction, or rather, lack of it. The exceptional boy who needs to be put upon his own resources and is stimulated by solving his own problems, makes more advance than he could with more assistance. He it is who soon becomes ambitious to work in a larger sphere and leaves the country for the city. And here I want to claim that it is the exceptional country boy that makes his mark, just as it is the exceptional city boy who comes to the front. If it is not the school that makes the country boy so successful, what is it?

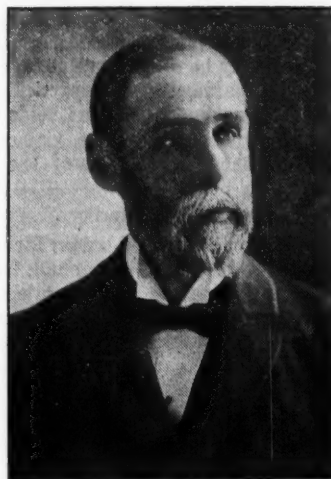
He lives on a farm where there is work to do. He gets up early in the morning. There are the chickens to feed and the cows to drive to pasture. He returns from the pasture with his oxygenated blood flowing healthily to his finger tips and an appetite that enables him to eat heartily of an abundant and simple breakfast. He walks a long distance to school, studies his lessons and walks home to eat heartily of his dinner. The day is filled with work that fits him for a life of responsibility. Besides this there is abundant opportunity to develop his ingenuity. The hencoop needs repairing and he must do it with the few tools at his command. The bars are broken down and he must hunt for withewood, which he has learned to recognize. If none is found he takes a birch, twists it and makes the necessary withes. In a hundred ways his ingenuity is exercised, which, with the habit of work does more to fit him for the practical affairs of life than anything he could ever get from books.

How is it with the city boy? He has no chickens to feed; there are no cows to drive to pasture; there is usually no horse. There is no firewood to saw, no kindlings to split; the coal is shoveled in by the driver. The boy gets up in the morning, eats his breakfast, and goes to school. At noon he comes home, eats his dinner, and goes back. After school there is nothing to do but eat supper before going to bed. The boy is a boarder in his

own home. This leaves several hours with nothing to do. He has no work, and so plays. The play in itself is all right, but the yard is not large enough to hold him. It usually takes two or three. When these become too small he takes to the street and there meets, of necessity, more or less evil. He has no work and no responsibility.

His mother is, of course, anxious for his welfare, but she has her social duties to perform and these often take her away from home when her boy needs her care. I have seen boys upon the street, on a Friday night, when from my knowledge of their superlative piety I was sure that both parents were at prayer meeting. They should have been at home and had their boys there.

How is it with the father? He is the bread winner and must needs be away from home all day. At night



State Supt. De'os Fall, of Michigan. (See page 125.)

he is tired and wants quiet and rest; so he goes to his club and remains till bed time; or he belongs to half a dozen orders and, of course, must attend the meetings. Perhaps he has neither club nor order to attend. He then goes to some stable, office, or cigar store and there helps decide the weighty questions that vex the nation or the state.

I am not condemning all parents. I have in mind two boys with whose parents I was well acquainted. One boy has entered the ministry and is making a name; the other has entered another profession. These were city boys who were neither degenerate nor failures. They can be duplicated many times. I see before me a father whom I have seen in the high school inquiring about the work of his daughter. From what little conversation I overheard I learned that he had been in the class-room watching her work. It is safe to say that his children will not be failures.

This brings us to the remedy for the present state of affairs. Some would put it upon the schools. There are some things that the schools can do. The work of the country home can be imitated, to some extent, by manual training, of which there should be more rather than less.

Not much of the problem, however, can be solved by the school. It belongs to the home. There are three institutions that have to do with the training of our children—the public school, the church, and the home, and the greatest of these is the home. Any dream of the future that displaces the home by the school, the church, or any other institution is a nightmare. The individual cases I have cited show what the home can do with this problem, and that it will be so solved in the future I confidently expect.

The National Educational Association will meet at Detroit, July 8 to 12.

Meeting of the Department of Superintendence at Chicago, February 26-28.

*Part of an address.

Principles of Fireproof Construction.

The best school-houses in our more progressive communities are carefully fireproofed. Every one of the handsome new buildings which Mr. Snyder has designed for the New York board of education is built up on a structure of steel beams, and has floors, partitions, and columns that are as thoroly fireproofed as any skyscraper of lower Broadway. Indeed it would seem to be almost high crime to erect a school-house in a great city and not insure the inmates, so far as is humanly possible, against the dangers of conflagration and collapse. Adequate fireproofing adds to the expense of school-buildings something like twenty per cent., but it also adds to their permanence; and, when human life is at stake, the question of extra expense ought to be eliminated.

A statement, in non-technical language, of a few of the principles that govern modern fireproof construction will be interesting to the general reader.

The True Function of Fireproofing.

At the outset there is a popular misconception to remove. Many people suppose that if a building is composed entirely of incombustible materials it is fireproofed. Nothing is further from the truth. It is conceivable that a school-house might be built entirely of steel and brick; that its floors might be laid in cement; that there might be almost no wood work anywhere used in its construction; even the wooden desks might be eliminated. Such a building could not of itself catch fire; but in case of a conflagration next door it would come tumbling down on account of the action of the heat upon the steel construction.

That is what fireproofing means: It is the protection of steel construction against the injurious action of heat and corrosion.

Strong as are steel girders and beams at an ordinary temperature, they lose their strength when subjected to any extremity of heat. The balance of loads and supports in a modern building is a very delicate affair and is easily disturbed. A column of steel which has to support a weight of thousands of tons will not, at a very high temperature, support its own weight. To raise its temperature even a few hundred degrees, as may easily hap-

pen in case of a slight interior conflagration is to weaken its supporting power in a dangerous degree.

Add to this loss of supporting power the fact that steel expands when heated; that beams and girders push and thrust when heat is applied in a fashion that makes sudden collapse of the whole structure probable—and you have good reasons for not trusting to ordinary "mill construction" in a building that holds a thousand or two thousand school children. The case of a New York bank building with ordinary unprotected steel skeleton, which suffered utter collapse from the burning of another building forty feet away is a significant warning.

Fireproofing, then, is the protection of the steel frame from the action of high heat and from corrosion. If the structural elements of a building are properly encased with fireproofing material, the presence of considerable quantities of combustible matter in rooms, tho very undesirable, need give no alarm so far as the safety of the complete structure is concerned. The combustibles of a single apartment may easily be destroyed without any damage to other portions of the building.

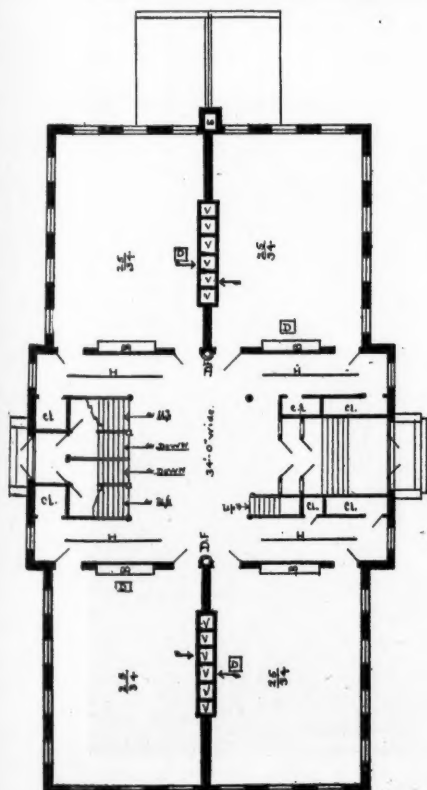
Forms of Fireproofing.

A very elementary form of fireproofing occurs in nearly every steel building. The exterior walls of brick and stone cover a considerable proportion of the structural parts and serve as a valuable protection. There are left, however, great points of danger in case of fire, such as the floors, the columns, and the partitions.

For the efficient insulation of these elements there is on the market a great number of preparations and devices. The test of their being fireproof is that they shall successfully withstand the highest temperatures that are obtained in actual conflagrations (2,000 to 2,300 degrees Fahrenheit) and that they shall also retain their strength and resist disintegration when suddenly cooled by a stream of water. Other requirements are that a material shall be inexpensive, light, a non-conductor of heat; it should also not discolor plaster.

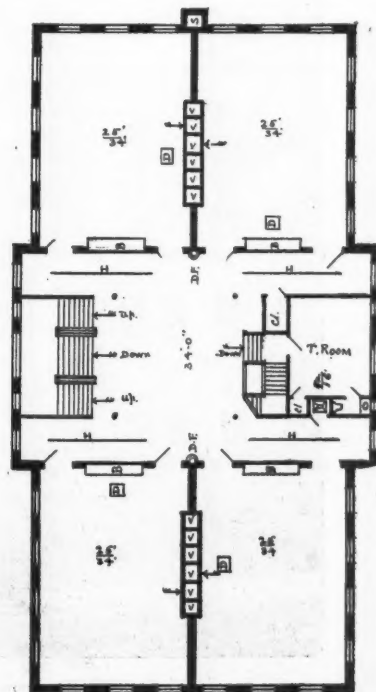
No material as yet found fills all these requirements perfectly, but many of the substances that are dealt in meet them to such a degree that they may fairly be considered as fireproof.

The materials, omitting patented or secret processes



FIRST AND SECOND FLOOR PLAN
of EIGHT ROOM SCHOOL
BERWYN-ILL.

D-Teachers Desk—
B-Book Cases—
H-HAT AND COATS—
DE DRINKING FOUNTAIN
T.V. VENTS—



G. W. Ashby, Berwyn, Ill., Architect. Courtesy of the Radford Review.

group themselves into four general classes :

1. Cinder concrete, made of high-grade Portland cement, sand and anthracite cinders. Rather heavy but possessing high fire and water resisting efficiency.

2. Burnt clay products. Ordinary and hollow brick, porous terra cotta, etc. Solid brick is very heavy ; the other preparations are extensively employed.

3. Plaster of Paris composition. This is known to be an excellent non-conductor of heat. When wood shavings are incorporated it is very light.

4. Ordinary stone concrete. Very heavy, but capable of standing high temperature.

Methods or Systems.

The treatment of floors with fireproof material has given architects and engineers a great deal of trouble. There are three general ways of constructing a fire-proof floor.

1. Monolithic construction.

By this is meant the use of a single piece of material in the form of a flat slab or a solid segmental arch, between or over the steel floor beams. The material is generally placed in position while in a plastic state and allowed to harden over a temporary wood or permanent metal centering. For this plan is claimed the advantage that there is no thrust ; that is to say, the segmental monolith is not a true arch at all and exerts no lateral but only a downward pressure on its abutments.

2. The use of real arches, either segmental or flat. As the Arabian proverb has it, "the arch never sleeps." It always exerts a lateral thrust, which in the case of these floors, has to be guarded against by tying the beams with especial carefulness. Flat arches are very extensively employed.

3. Constructions with light metal constituents. This means the use in flat arches or flat slabs of rods, bars or meshes of metal. The reason why such insertions are always made in the lower section of the material is apparent if you consider the question of compression and tension in a beam. In any beam that is supported at

either end the material in the upper portion tends to be compressed while that on the lower side tends to be pulled apart by the sagging of the beam. Now all the fireproofing materials are stronger in compression than in tension. There is therefore sound reason in strengthening the portions of the material that are subject to tension.

The fireproofing of floor surfaces is perhaps the most difficult problem in the various systems ; the protective covering of vertical columns and pilasters is, however, not less important. The ideal system of fireproofing is one in which all the structural iron is thoroly covered.

There are two ways of doing this. The exposed iron work may be incased with the same materials as are used in the floors ; there may, for instance, be monolithic constructions forming a solid continuous protection around the columns. The other plan allows the ordinary materials of finish and veneering to be utilized ; under this head come natural or artificial stone, sheet metal, cement, plaster, and combinations of these. A favorite material because of its economy is plaster on wire lath. This ought always to be furred so that there will be air space between the plaster and the iron member to render the transmission of heat possible only thru radiation.

One other general principle should be specially noted. Fireproofing material should, so far as possible, be massed about the beams or girders to be protected. It is a defect in many systems that the material is evenly distributed thruout the space between beams ; this is not in the direction of economy and is bad in that it fails to afford adequate protection.

A special discussion of some of the most prominent systems of fireproofing follows in the department of School Equipment. Aside from the practical value to every superintendent and principal of a knowledge of these methods it is a matter of general intelligence to understand something of the principles governing the construction of the marvelous buildings of to-day.



Emerson School, Berwyn, Ill. G. W. Ashby, Arch. Orion C. Scott, Supt.

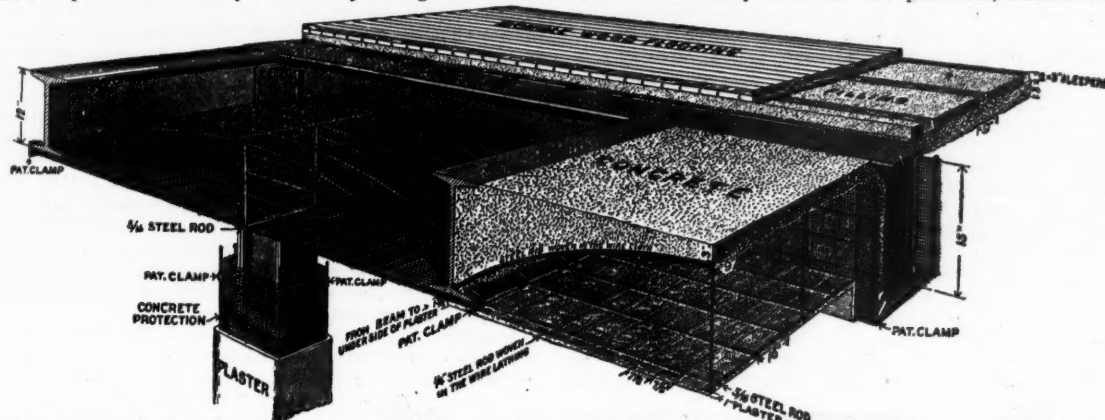
School Equipment.

Under this head are given practical suggestions concerning aids to teaching and arrangement of school libraries, and descriptions of new material for schools and colleges. It is to be understood that all notes of school supplies are inserted for purposes of information only, and no paid advertisements are admitted. School boards, superintendents, and teachers will find many valuable notes from the educational supply market, which will help them to keep up with the advances made in this important field. Correspondence is invited. Address letters to *Editor of The School Journal*, 61 East 9th street, New York city.

Methods of Fireproofing.

The Roebling System.

The fireproofing devices employed by the well-known Roebling Construction Company, of New York and Trenton, are the result of experiments made by several expert engineers in the



employ of John A. Roebling's Sons Company. The various forms of arched and flat construction employed have been carefully worked out according to engineering principles, and the material used—a combination of high-grade Portland cement, sand, and the residue of anthracite coal consumed in steam boilers—has been subjected to the severest possible tests.

The two designs shown on this page speak for themselves. In System A the arch construction is seen. The wire cloth upon which the Portland cement concrete is laid is stiffened by woven-in steel rods. When the concrete hardens it forms a monolith with abutment against the lower flanges of the steel beam. The ceiling is formed by a series of rods attached to the lower flanges by patent clamps. Under them is laced the Roebling wire lathing. This construction produces a ceiling

settle. It can break if the material of which it is composed is lacking in elasticity; but experience has shown that the concrete preparation employed in the Roebling system possesses great elasticity.

Another point in favor of the Roebling arched construction is that it keeps the entire section in compression. The maximum strength of the concrete is thus secured and there is no need to resort to light metal elements in the construction.

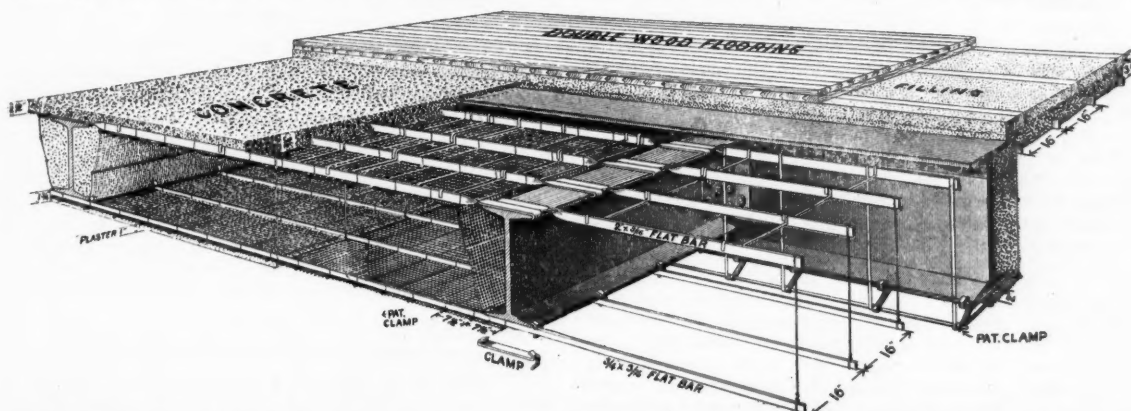
The permanent wire centering is a feature that appeals strongly to builders. It is put in place before the concrete is laid on and is allowed to remain. Superfluous water in the concreting easily drips thru it and thus the conditions are favorable to rapid drying. The lives of workmen who have fallen have repeatedly been saved by this centering. The Roebling system in other parts of the building than the floors is the result of careful study and tests. The partitions, whether solid

or hollow, are light and vermin proof, and possess sound-confining quality. There are schemes of furring and wire lathing as a foundation for ornamental plaster effects. Perhaps the most remarkable architectural triumph of this system is seen in the elliptical groined arches of the Church of St. Mary the Virgin, New York, which were produced by the Roebling system of furring and wire lathing.

At the offices of the Roebling Company it was stated that the cost of their fireproofing has been brought down to such a figure that it is within reach of school people in the construction even of the more modest types of school-houses.

A Missing Link in Fireproofing

One point of weakness in most fireproof buildings lies in the fact that the doors are of inflammable material. In case of



which cannot settle and which cannot discolor the plaster that is laid upon it.

In System B a flat construction is shown. A light iron framework, imbedded in concrete, spans the interval between the iron beams in the form of a slab. The same ceiling construction may be employed in this as in the foregoing system. This method of construction is intended to meet the requirements of a light low-priced floor with wide spacing of beams.

The great advantage claimed for the Roebling method of dealing with floors is that there is no settling of arches. As a building grows old, little changes take place which cause the arches, whether flat or segmental, to settle. The result appears in cracks and gaps, both in floor and in ceiling, invariably appearing over or under the iron beams. A segmental arch of concrete, being a monolith, or single piece, cannot

fire an open doorway acts as a flue and is an element of extreme danger. Especially is this true when a fire breaks out in a building adjacent to the fireproof structure.

As a corrective of this danger a fireproof door has lately been put upon the market under the name of Richardson's Patent Fireproof Door. It is accepted by the New York building department as a necessary part of fire-proof construction.

Some points about these doors are as follows: They are handsome in appearance, being of plated duplex copper. They cannot warp, shrink, sag or swell, and have no joints to pull apart. They are reasonable in price and are much lighter and more usable than the solid iron doors which are used for office vaults. This door is made by the Fireproof Door Company Minneapolis, Minn.

Terra Cotta Fireproofing.

At the establishment of Henry Maurer & Son, 420 East 23rd street, New York, stands a flat arch with a span of twenty feet, loaded with 510 pounds to the square foot. For months builders and contractors have been dropping in to view it with surprise and admiration. It is a marvel of construction.

After a test of several months, heavily loaded all the time, it showed a deflection of but 9-16 of an inch and, when the load was removed, it sprang back to its original position. Such is the toughness and elasticity of burnt clay.

The architectural peculiarity of this arch is that it has no keystone, at least none of a recognizable type. The terra cotta blocks of which it is composed are of a uniform size. They are held in place by what may, in a Hibernian way, be termed distributed keystones of steel.

As may be seen from the accompanying illustration the blocks are kept up in the greatest rigidity by iron T rods.

This form of arch, which is subject to patents, affords a very novel device in fireproof construction, dispensing with iron beams and girders. It gives a flooring that is about twelve inches deep and of the best type of fireproofing. Both ceiling and floor are provided for without any iron beams or wire gauzes. The floor needs no filling and the ceilings are all ready for plastering. Partitions can be erected on any part of the arch, either lengthwise or across. This is the latest addition to the numerous and excellent arrangements employed by Henry Maurer & Son in their exploitation of terra cotta as a fireproofing material.

A word about terra cotta may be in point: Many of the leading architects in the country believe strongly in it as the most usable fireproof substance. Mr. John M. Carrère, for instance, of the firm of Carrère and Hastings, says that in his practice he uses nothing but terra cotta for fireproofing pur-

Asbestos Preparations.

As is well-known the fibrous mineral *asbestos* is incombustible, acid-proof, and practically indestructible. As a fire-proofing medium it is rapidly growing into favor. Every year sees new uses to which it can be put.

In particular the energetic H. W. Johns Manufacturing Company, New York, is exploiting the possibilities of its asbestos wares with results that are simply astonishing. Even to mention the names of the preparations they have brought out would require a great deal of space.

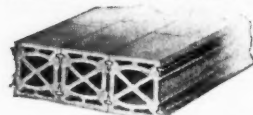
Asbestic Wall Plaster

easily takes rank as one of their most valuable compounds for use in school buildings. The objections to ordinary plaster are too well-known to need comment. It was therefore a step in advance when the Johns people discovered three years ago that the Canadian asbestos which they employ can be worked into an admirable plaster by the addition of a small percentage of rock lime.

In any building, even if already structurally fireproofed, the use of asbestic as a wall plaster is a guarantee of additional safety. The substance is, moreover, used as fireproof filling. Indeed it is claimed that asbestic has qualities of lightness and permanence that are going to make it the most popular filler on the market, whether it is used for partitions, columns, or floor spaces. It is of a tough, fibrous, and a felt-like nature; it has remarkable qualities of clinging to smooth surfaces, such as iron work; it is an admirable non-conductor of heat, and, when applied to steel construction, serves to prevent dangerous expansions and contractions.

As asbestic is a felt, it is a non-conductor of sounds and is therefore of great usefulness in the schools. Its sound-confining properties are excellent. Add to all the foregoing advantages the facts that asbestic is comparatively inexpensive,—

not dearer than high-grade plasters; that it can be spread over wood laths as well as over wire



Section of Herculean Arch.

lathing; that it is susceptible of the greatest variety of ornamentation; and you get a material for school construction use that certainly merits serious consideration.

poses. The only danger with it is that many architects use it too sparingly for safety, and thus subject the whole system to condemnation. It must be used so as to protect the entire steel frame.

Cost of Construction.

Terra cotta fireproofing is not expensive. Good builders find that it adds to the cost of a building not more than between ten and twenty per cent. There are few communities that could not afford to stand for this added cost for the sake of the safety of their children.

Forms of Terra Cotta.

The various forms and shapes of burnt clay that are used in modern buildings are becoming very familiar. We see them in every building that is in process of construction. The Maurer firm finds that the porous terra cotta products are in great demand on account of their lightness and their sound-deadening and vermin-proof qualities. Nails can be driven into this material and plaster can be applied with admirable results. At the same time it is exceedingly tough and durable.

The method of manufacture is interesting. Raw clay is mixed with sawdust or other combustible material. Subjected to intense heat, ranging as high as 3,000 degrees Fahrenheit, the combustibles are all consumed, leaving the brick or tile porous.

The hollow bricks, of solid and of porous terra cotta, come in a great variety of shapes adapted to different forms of construction. There are special kinds for furring walls and partitions, for fireproofing iron columns, for roofs and hanging ceilings. All these matters of detail, tho they cannot be given here, ought to be carefully looked into by building committees; and there is no place where they can be studied to greater advantage than in the catalog, or better still, at the yards of Henry Maurer & Son.

Asbestos Pipe and Boiler Coverings.

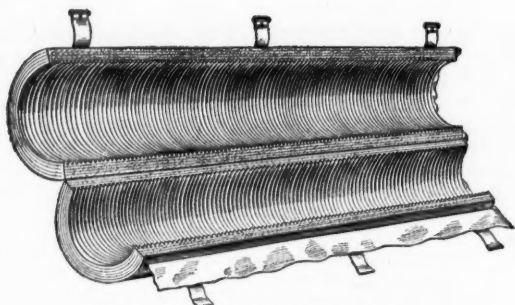
Another use of asbestos which the Johns Company has exploited with great thoroughness and success is in the preparation of coverings for pipes and boilers. The loss of heat from unprotected pipes in most buildings is little short of appalling. The necessity of economizing in this direction is universally recognized.

Here are the marks of a good covering: (1) It should prevent radiation of heat,—and as white surfaces radiate least, it should be painted white; (2) it should be composed of a good non-conductor of heat; (3) it should be calculated to stop the air circulation which carries away large quantities of heat by convection.

To meet these requirements the Johns Company has made not one, but several different coverings, each adapted to some particular conditions of heating. One of these effective preparations that is comparatively inexpensive is the Asbestocel Sectional Pipe Covering, which is here shown in section. This is a cellular pipe comprising a multitude of little pockets of air. The way the corrugations run around the pipe should be noted. If they ran lengthwise there would be long ducts in which a circulation of air would be possible; running concentrically they imprison little loops of air space.

The Asbesto-Sponge Felted Sectional Covering is another interesting product. Some time ago it was discovered that there is an adhesive attraction between asbestos and common sponge. The result is a light porous covering that can be applied to any part of a steam plant. It comes in cylinders, cut longitudinally, which can be readily "sprung" over the pipe.

These are only two of the many coverings made by this company. A most remarkable test of their fireproof quality occurred in the great fire that destroyed a portion of the works of the Standard Oil Company at Bayonne, N. J., last July.



The Asbestocel Sectional Pipe Covering.



The Asbesto-Sponge Felt Sectional Covering.

After the fire is was found that the asbestos fire-felt coverings of the pipes leading from the boiler-house, standing in the midst of charred ruins and twisted iron work were quite unscathed.

The Keasbey Magnesia Coverings.

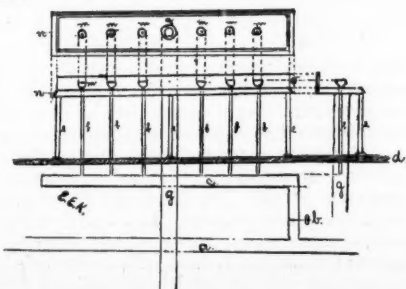
The Keasbey Magnesia Coverings are composed of carbonate of magnesium (85%) with which is mixed about fifteen per cent. of asbestos fiber as a bond. The result is a cellular substance that is only about 7 per cent. matter by volume. The remaining 93 per cent. is imprisoned air; this, of course, makes it of very great value as a non-conductor. It occurs in sections neatly bound by Japanned iron bands and painted white. So light is this covering that it in no way overloads any vessel or pipe to which it is applied.

This covering can be fitted to steam pipes and, in the form of Magnesia Blocks, to hot-water boilers. The actual saving in fuel when all exposed surfaces are covered is from 15 to 25 per cent. In the case of the schools of a good-sized town or city this means a tidy sum of money annually.

Where the ordinary furnace system is used the hot air ducts, as well as the furnace itself, can be encased in magnesia blocks and the cellar be thus kept cool while the heat is delivered into the rooms as rapidly as it is produced. The coolness of the air in the cellar is an important factor in ventilation. For a furnace to throw out thru the hot air ducts large volumes of comfortably heated air a first requisite is that there should be a good cold air intake. There is no economy in heating the cellar.

The Magnesia Sectional Coverings are made by Robert A. Keasbey, Buffalo and New York.

The program arranged for the meeting of the Department of Superintendence at Chicago, Feb. 26-28, which was printed in full in "The School Journal" Jan. 26, indicates that the meeting will be one of the most important in the history of the N. E. A. There ought to be a rousing good attendance



Working Drawing of School Fountain.

A Model Drinking Fountain.

By CHARLES W. HAWKINS, Amityville, L. I.

The question of school sanitation is as important as it is recent. Great progress has been made in many directions. Heating, ventilating, etc., have hitherto received nearly all the attention, while the matter of providing pure water in a cleanly way, for the pupils, has been generally neglected. Providing pure water is as important as providing pure air.

The old time arrangement of a pail and a tin dipper is not advocated at the present time, tho there are many schools that still use this antiquated method of furnishing drinking water. But there are many well built and well equipped schools that have a single cup at the faucet and seem satisfied with the provision, tho scores of children use the cup, one after the other. Suppose, as is often the case, there is one cup for each 100 children; it will be but a short time before the cup is filthy, and no amount of hurried rinsing will purify it and remove the danger of contagion. I have known schools in which many of the children would go all day without drinking rather than use the contaminated cups; while others would drink from sheer necessity and bewail their lot in having to follow all others, white or black, dirty or well kept.

Any arrangement in schools for drinking should have the following requisites:—

1. There should be an ample supply of pure water.
2. Devices should be provided so that one need not have to drink "after" another.
3. There should be means for satisfying the thirst of a great many in a short time. Suppose twenty or forty pupils come into the building just at school time, desiring a drink. With the cup system where each must rinse before drinking, how long would it take this number to drink? Any school man can readily answer and will recall the confusion likely to result.
4. The drinking apparatus should be placed where it can be under the easy and direct supervision of the teachers.

The drinking fountain, recently put into the Amityville (L. I.) union school, meets these four requirements completely. The plan is as follows: (See illustrations.)

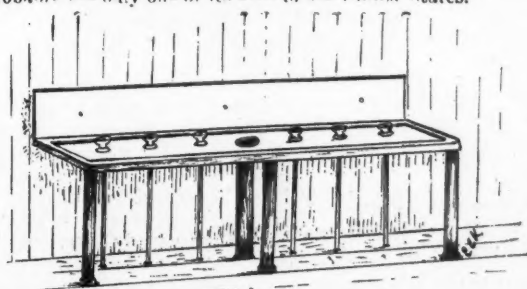
There is a marble slab 10 ft. by 1½ ft., by 1½ inches, beveled on the edges, and so countersunk that the lowest part of the upper surface is in the exact center of the slab. This is placed horizontally on three nickel standards, so that it is 2½ ft. from the floor, and perfectly level. The back of the slab rests against the wall, and has as a back piece another slab of the same length, but thinner and narrower. Connected with the water pipe in the basement are six small upright nickel pipes, penetrating the horizontal slab at equal intervals of space. The small pipes each terminate in a small cup-shaped expansion which rises 3 inches above the surface of the marble. From the center of these cuplike forms the water bubbles constantly with the force desired (being regulated by a stopcock in the main pipe) and it is from these bubbling centers that the children drink the water without touching their lips to the cups. The waste runs to the center and is thence conducted to a separate cess-pool.

The constantly flowing water keeps cool and pure. As it bubbles up and over the sides of the "cups," it carries away whatever refuse may have been left by one who has drunk, before another can drink; as may be shown by dropping small particles on the water and noticing that they are immediately carried away. This obviates any possible contamination.

There being six bubbles, six children are able to drink at once; twenty-four may drink in a minute, and thus the whole number of those who may be thirsty at any one time can be satisfied rapidly.

The fountain is situated on the first floor in the main hall, between the boys' and the girls' entrances, and therefore is easily under the control of the teachers.

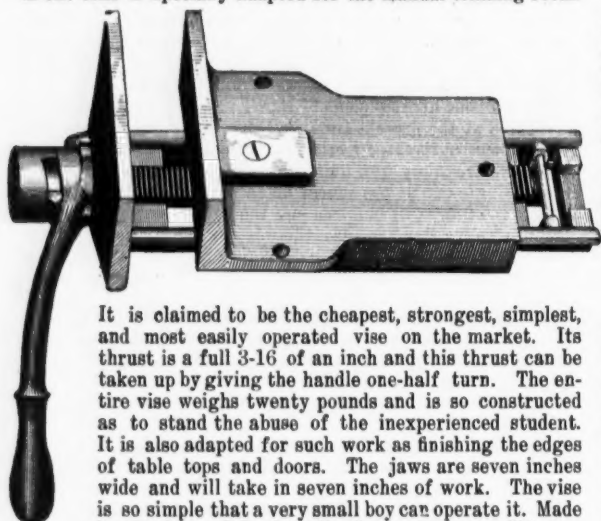
This unique fountain was made to order from plans drawn according to the instruction of the board of education and is probably the only one of its kind in the United States.



Appearance of School Fountain.

A Vise for Wood Workers.

The new Sheldon Wood Workers' Vice which is here shown is one that is specially adapted for the manual training room.



It is claimed to be the cheapest, strongest, simplest, and most easily operated vise on the market. Its thrust is a full 3-16 of an inch and this thrust can be taken up by giving the handle one-half turn. The entire vise weighs twenty pounds and is so constructed as to stand the abuse of the inexperienced student. It is also adapted for such work as finishing the edges of table tops and doors. The jaws are seven inches wide and will take in seven inches of work. The vise is so simple that a very small boy can operate it. Made by the Orr and Lockett Hardware Company, Chicago.

On Keeping Clippings.

If the present literary era ever receives a distinctive name, it ought to be called "The Clipping Bureau Age." Very few literary workers are able to dispense with clippings from the daily and weekly press. The newspapers are full of matter that hits everybody who is preparing a book, a magazine article, a lecture, a course of study. The superintendent or principal who does not make use of clippings, if any such there be, is hopelessly behind the times.

The great problem with most workers who gather this sort of material is how to preserve it. The old-fashioned scrap-book is cumbersome, inconvenient, and expensive. When a clipping has been used or has ceased to be timely, it ought to be discarded; but the scrap-book does not allow this.

Alphabet files have been on the market for some time. They are objectionable to many people in that they require a great deal of shelf room and may go unfilled for years.

The Clipping File.

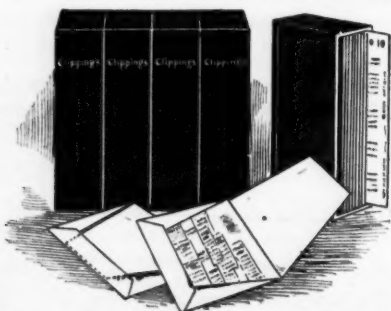
is the name given to an excellent device for filing and classifying the mass of material that every literary craftsman who has once begun to collect is overwhelmed with.

The material outfit is this: There is a good strong case with a front in imitation of leather. So far as looks go, it is an addition to one's library. The case is open behind.

Inside are paper pockets made of jute cardboard, of a unique and very convenient form. The clipping can be easily slipped in and out, and will stay in place while the pocket is closed.

A very simple device this. It has its advantages.

The pockets are much more convenient than ordinary envelopes for slipping clippings in and out. Then, too, you can peep in at the contents without removing them. The topic of the clipping contained within is to be written in such a place on the pocket that it can be read without removal from the case; but if the pocket has to be removed, there is no diffi-



culty, for the pockets stand side by side instead of lying one upon another.

If there were nothing but what has already been described this clipping file would be a boon to the collector. Everything is there for those who are satisfied with a rough-and-ready system of filing. For those, however, who want a more elaborate scheme, the clipping file provides a topical scheme of classifica-

tion. This is printed on the pockets. Suppose your general subject is architecture. On Pocket No. 4 you will find a list of subdivisions that will be of great assistance in classification. You can start in with a few clippings on one of these subdivisions and extend your collection in various architectural directions. A great advantage of this plan over that of alphabetical classification is that you can see at a glance the various relations of your subjects. For instance, the subjects of music, musical instruments, drawing, painting, sculpture, and architecture lie side by side.

It is, however, to be understood that the system of classification is only a suggestion. You take it or leave it, according as you need it. Each user can develop the system of classification that seems to him to be most usable. Made by the Clipping-File Company, Cleveland, Ohio.

The Chautauqua Literary File.

Another interesting scheme of classification is provided by the Chautauqua Literary File. As a matter of mechanical construction this consists of a series of ten portfolios which stand on an ordinary book-shelf, table, or desk. Each portfolio is 7½x11x10½ inches in size and weighs three-quarters of a pound. The contents are protected from dust, moisture, and fading because the edges are practically air tight and each portfolio is provided with double folding lids which are held securely when closed by a patent fastener. The large lid, when opened, serves as a lap table for use at conventions and other places where there are no conveniences for writing. The smaller lid forms a handle by which to hold the file. The portfolio is strongly made and is covered both inside and out with black morocco finishings.

Inside there are six removable receptacles so made that material can be readily put in or taken out. They hold their contents securely. These

receptacles are firmly bound in the case by a metal post. They are, however, released when the smaller lid is lifted so that the order may be changed, part of them be removed or others added. Above the first receptacle in the metal post of each case there is a contents card, made of a different color from the receptacles to distinguish it more readily from them.

In the literary classification there are four steps: subject, sub-division, sections, and topic. Each case files seventy-two different topics. These can be arranged alphabetically and entered in the seventy-two prepared spaces on the colored contents card. It is then necessary only to open the large lid to see what is inside; a cross reference system shows exactly where the desired topic is to be found. On the back of each receptacle is a reference chart on which readings in thirty-four different magazines or books may be noted. Thus each file provides for seventy-two topics with over 200 reading references, and a complete set provides for 720 topics with over 2,000 references. Educational Specialty Company, Detroit, Mich.

Colored Crayon Pencils.

The Joseph Dixon Crucible Company has published an interesting leaflet descriptive of the advantages of their colored crayon pencils in school work. These pencils have been brought to practical perfection in the last few years. They possess uniform quality, plus vividness and variety of color.

The announcement is illustrated with two very charming drawings made by young children in Philadelphia public schools. Prof. W. A. Mason, director of drawing in Philadelphia, heartily recommends the crayons, especially for use in the elementary grades.

A Device for Arithmetical Drill.

The Borden-Wallace number board is intended for use in the first five grades of public schools. The novelty of the arrangement arouses the interest of the pupil and holds his attention.

The construction of the device is as follows: The figures are printed in alternate red and black colors upon six endless straps that move upon two sets of rollers. Numbers are used to designate the straps. No. 1 contains the numbers from 0 to 4; No. 2 the numbers from 0 to 6; No. 3 the numbers from 0 to 8, etc.

You can use four straps at once. The order of the straps may be changed or any one may be removed and another substituted. All the straps may move together two may move together, or they may be moved independently. Be-

tween the endless straps are strips of blackboard. Upon these may be placed the numerical signs (+ — × =) in chalk. The figures are $1 \times 1\frac{1}{2}$ inches so that they can

well known educators saw the exhibition in New York. The collection has now gone to Bloomfield, N. J., whence it will tour the New Jersey cities. It has been promised for Baltimore a little later.

Other Traveling Art Exhibits.

The way the Helman-Taylor Art Company, New York, manages its system of traveling art exhibits is interesting and suggestive. It has a collection of 125 reproductions of the world's masterpieces. Along with these goes an illustrated catalog which is on sale, at a nominal rate, wherever an exhibition is held.

The conditions under which the collection may be sent out are two-fold:

The entire group of pictures may be sent, free of charge, to any competent committee which will attend to its proper exhibition for four days, charging certain admission fees for children and for adults. Under this plan it is understood that the entire proceeds of the exhibition shall be expended in the purchase from the Helman-Taylor Art Company of pictures for educational decorative purposes. Unless the proceeds exceed a certain sum the committee in charge pays all express charges.

Under the second arrangement the local committee pays a fixed charge for the loan of the exhibit, making its own terms of admission and dealing with its surplus, where one appears, at its own volition.

In either case the pictures must be insured and must be returned in good condition.

The J. C. Witter Company, New York, is also very much interested in this work of sending out exhibitions. Their method does not require the expenditure of the surplus, where one appears, upon Witter pictures, tho ordinarily such money is so spent. This company has some dozen exhibitions that are constantly being sent out.

The Trade in Vertical Pens.

"I am sure, from the conditions of our business," said Mr. William Trevelyan Brown, of the Esterbrook Pen Company, "that there is a slight reaction, perhaps temporary, against vertical writing. We make, as you know, special pens for vertical writing. The demand for these has not been so brisk this year as formerly, while there have been more sales of the pens that are adapted to slant writing. I do not think however, that the reaction has gone far. Personally I hope that it will not do so."

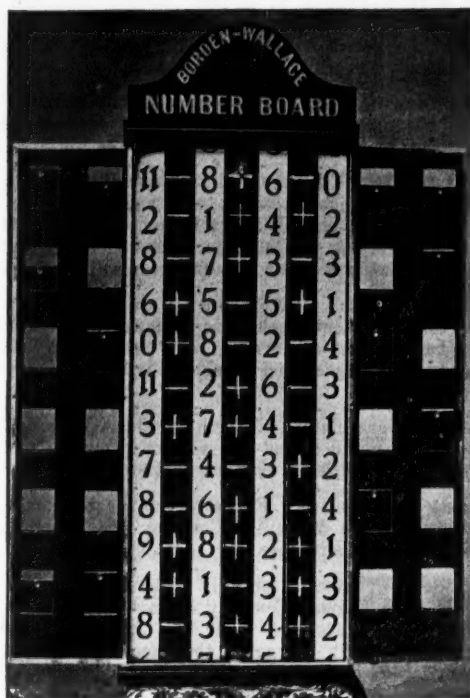
At the house of Joseph Gillott & Sons, Mr. Henry Hoe said that they had not yet noticed any appreciable change in the demand for pens, tho it was likely enough there might be new conditions before the next school year begins. His sympathies are somewhat with the reactionists. The vertical pens are less satisfactory from the manufacturers' point of view, altho they have been a great success financially.

Casts That Will Clean.

The Alabastro casts are something to which the attention of the schools should be called. They can be cleansed with water without injury. This is something that cannot be done with the cheap plaster product.

The name *alabastro* is given to the casts because the material used in their composition is alabaster, quarried in Italy. Alabaster takes a fine, hard finish closely resembling marble or ivory, and is very durable. Details of the original come out and are retained very well in alabaster. The example here given, Barye's Lion, shows something of the effect of a cast in alabaster.

These casts are made by Rexford Bellamy & Company, Chicago.



The Borden-Wallace Number Board.

readily be seen across the room. Each strap contains twenty-six figures. They may be moved upwards or downwards by means of a knob upon the roller.

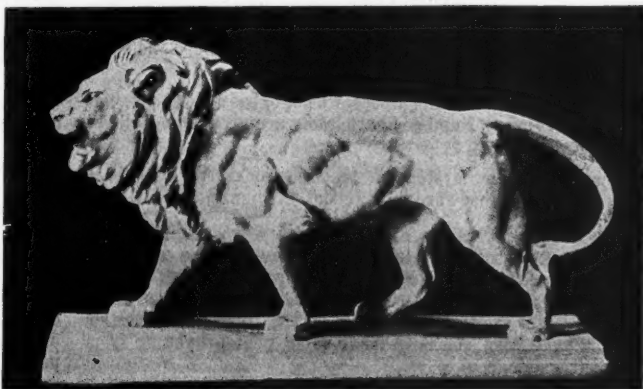
A few of the many uses of the board may be here suggested. The columns are very useful for addition. Beginning at the right each column is more difficult to add than the preceding. Thus in ungraded schools, two, three, or four classes may add at once. Classes may work across the number board from left to right or from right to left. Again the right hand straps may represent units' place, the next representing tens, etc. With such numbers addition or subtraction may be performed. As the figures are printed in red and black, fractions may easily be formed by letting one color represent the numerator and the other the denominator and *vice versa*. There are also numerous exercises in multiplication and division. In fact the ingenious teacher can work out a great many schemes and problems of her own.

This excellent device is made by Borden & Wallace, Minturn, Cal.

Prang Traveling Exhibition.

A memorable exhibit of drawing and painting done in public schools under the Prang system was held at the rooms of the Prang Educational Company, 3 Eighteenth street, New York, January 19. It was frankly a collection of show work, intended, as was stated by Mr. W. E. Cochrane, New York, director of the company, to illustrate the importance of the *idea* in public school art teaching. As is well known, the Prang drawing books give specimen examples of drawing—say a dog and a cat on a page—and asks the teacher to see that the blank spaces on the pages are filled with animal studies suggested by but not copied from the examples. In other words, an exercise in artistic invention is called for.

Now Mr. Cochrane finds that a great many teachers fail to secure good results in this work; the artistic inventiveness of their pupils is not stimulated. As an example, therefore, of what can be done under skilful teaching he recently gathered from some of the most skilful teachers of the country, specimens of what their classes could do in the way of developing ideas. The result was a collection of drawings that illustrate public school art at its best. Half a dozen studies, based upon a single motive, hung side by side, suggest the variety of interesting ideas that will be called forth when the imagination of pupils has been properly aroused. A great many



Educational Trade field.

The American Publishers' Association.

Sixty of the foremost publishers of New York, Chicago, Boston, and Philadelphia are in the association for mutual "co-operation, protection, and advancement," which was incorporated at Albany, January 10, last. This is said to be the first association of this kind among American publishers. None of the houses given over entirely to text-book publishing are affected by this movement.

The prime movers in the new organization were Charles Scribner, Col. S. B. M. Harvey, Daniel Appleton, and George H. Mifflin. Mr. Scribner is president and Mr. George P. Brett, of the Macmillan Company, secretary.

Col. Harvey in an interview reported in *Geyers's Stationer* says: "We have organized just like any other line of business, to protect and advance our interests and for co-operation. There are many ways in which we can do this. We can pull together in matters affecting copyrights and in legislation regarding the publishing interests. We also aim to protect the rights of authors, encourage authors, and stimulate interest in reading. We expect to take every legitimate way."

A Text-Book Ruling.

A case of interest to educators came up recently before the California supreme court. It affected the question of text-books on penmanship in the public schools of San Francisco, and was in brief as follows:

In June, 1897, the board of education adopted the California system of vertical penmanship and made a contract with H. S. Crocker & Company to furnish text-books for a period of four years. On June 30, 1899, the board of education adopted the Shaylor system of vertical roundhand writing and made a contract with the publishers, Ginn & Company, to supply the necessary text-books.

J. C. Greene brought suit to prevent the adoption of the Shaylor system until after the four years' contract with the Crockers had expired. The Crocker Company and Ginn & Company came into the case as interveners. The lower court held that the Shaylor or any other system of writing or penmanship could not be adopted until after the Crocker contract had expired. An appeal was taken by Ginn & Company, and at once the supreme court reversed the lower court.

The supreme court holds that the adoption of the California system of vertical penmanship by the board and its contract with H. S. Crocker & Company to furnish the books were illegal because due notice had not been published prior to the letting of the contract. The board, in June, 1899, was therefore free to adopt the Shaylor or any other system of writing.

The Kny-Scheerer Company, manufacturers and dealers in natural science apparatus, announce that they have removed from 17 Park place to 225-233 Fourth avenue, at the corner of Nineteenth street, New York. With enlarged space they will have facilities for attending to their rapidly increasing trade.

The Sibley & Ducker Company has been incorporated under the laws of Maine with a capital of \$10,000.

The Baker & Taylor Company has leased the first loft of the building at 33 to 37 East Seventeenth street, facing on Union Square. Rapid growth of their business necessitated the change. The building to which they remove is already well-known to book-lovers, since the Century Company is located there.

The state board of education of Virginia has ordered that Maury's Geography, published in board covers, shall everywhere in the state be supplanted by the same geography cloth-bound. The better bound books are found to be in the end the more economical.

The Western Publishing House, Chicago, has added to its list the Speer Primary Number Chart lately acquired from Bellows Brothers.

The Sadler-Rowe system of teaching bookkeeping has been adopted at the Woodward high school, Cincinnati.

The Elementary edition of *The Inductive Geography*, published by Potter & Putnam comes out February 1. The maps are smaller than those used in the ordinary geography; but, as they contain only about one-fourth of the detail, they stand out in greater prominence. Many of the illustrations in this edition have been specially made from photographs or from original drawings.

Attention has just been called to a suit which has been filed in the United States circuit court at Chicago, Illinois, against the Century Seating Company of Chicago. The suit is for the infringement of three patents for school desk improvements which were granted to F. R. Beal, Allen D. Linn, and John Aenis, and are numbered respectively 415,601, 416,660, and 531,686. The school desks made by the Century Seating Company are known as the "Century Automatic."

The Greenwood School Supply Company, of Greenwood, O., has changed its name to the National School Supply Company and will continue to do a general business.

The J. C. Witter Company, 123 Fifth avenue, New York, has decided to discontinue its retail store and to devote all its energies to the school trade in art books, pictures, charts, and other materials. A sale at reduced rates of reproductions carried for other houses is now in progress and will be continued until April 1.

The Holden Patent Book Cover Company, of Springfield, Mass., has sent out a charming little decorated calendar, a symphony in blue-grey and silver. It is well worth writing for.

The Educational Bureau of North Carolina, Charles J. Parker, manager, has issued a neat and vigorously written pamphlet descriptive of the field for teachers in the South.

Recent additions to Dr. F. L. Sevenoak's force at the New York office of the Macmillan Company are Messrs. G. R. Ellsler and T. C. Moorehouse.

Mr. Henry Theobald, formerly general manager of the National Cash Register Company, has resigned, and his resignation has been accepted. Mr. A. J. Lauver, assistant manager, will be in charge of the executive work of the company until a general manager has been appointed.

Mr. Lyman Cornelius Smith, president of the Smith-Premier Typewriter Company, has been made a Chevalier of the Legion of Honor of France. This honor was conferred upon him by the French authorities for his services in the work of perfecting typewriters. The distinction is the highest that can be given in France to a business man, and is one which no wire-pulling or influence can secure. Mr. Smith is naturally very much gratified at his election.

Mr. Nathan Haskell Dole, the well-known poet, has taken charge of the advertising department of D. Appleton & Company. As one of the evening papers says, "This is proof positive that the literary side of the commercial art of advertising is exacting." Mr. Dole has been for years one of the most prominent literary men of Boston. He is best known perhaps as a student of Omar Khayyam. He was connected with the house of T. Y. Crowell & Company.

Mr. Daniel Van Winkle, so well-known among New York bookmen as the representative of the house of Leach, Shewell, & Sanborn, and, after the dissolution of the old firm of Thomas R. Shewell & Company, has now allied himself with Eaton & Company of Chicago, whom he will represent in the metropolitan district. His thousands of friends will congratulate Eaton & Company.

The Lynchburg, Va., board of education did a very intelligent thing when they sent Mrs. W. H. Baker, one of their most progressive teachers, out to Minneapolis to make a study of the system of teaching English literature employed by Prin. W. F. Webster, of the East Side high school. Mrs. Baker spent two weeks in close observation of the details of the methods of the school.

This is a bit of news that is, naturally enough, pleasing to Houghton, Mifflin & Company, who are the publishers of Webster's "English: Composition and Literature."

The *Musical Record* begins 1901 with a change in size; it is in book form. We do not yet see how the finely printed music pages for which it was famous are to be continued. While the new form is certainly handy, we shall miss the many pieces that we placed on our piano and are still on our music shelves. The *Record* has indeed had a record and an enviable one at that. We only wish its future may be as bright as its past; and we see no reason why this may not be. There are no publishers who have admitted so much brightness into the world as the Oliver Ditson people. We suppose to-day, at this hour, one million school children are singing from "Golden Robin," or other of their admirable books. May they eternally prosper.

Recent Deaths.

Abner C. Stockin, for many years the representative of the Harpers in New England and more lately associated with Houghton, Mifflin & Company, died Jan. 11. Mr. Stockin was one of the most interesting personalities in the book business. Until he was nearly forty years of age he was a school teacher in Maine, his native state. Entering the book business, he achieved an almost immediate success. An appreciative letter about Mr. Stockin and his work, from the pen of Mr. Warren P. Adams, appears on page 124 of this week's SCHOOL JOURNAL.

Mr. Johann Faber died January 15, at Nuremberg, Germany. He was the founder of the celebrated lead pencil factory. Twelve years ago he severed his connections with Mr. A. W. Faber, and with his sons organized the Faber Manufacturing Company.

Arthur J. Peabody, for many years a member of the firm of Charles Scribner's Sons, died in New York, Jan. 13. Mr. Peabody was a member of the well-known Peabody family of Massachusetts. During his long residence in New York he was very prominent in philanthropic work. He was one of the incorporators of the Five Points House of Industry and was actively interested in other East side missions.

Emery Cleaves, of the staff of the vigorous house of Lee Shepard, Boston, died Dec. 30. Mr. Cleaves was a native of Saco, Maine, and was with Lee Shepard, except for a short interval after they gave up their retail department, from 1865 until the date of his death. No man in Boston had a better knowledge of all the details of book production, nor was there any one who was regarded in a more kindly way by all the friends and patrons of his house.

Charles J. Reed.

A magnificent type of American manhood, energetic, resourceful, and kindly, was Mr. Charles J. Reed, vice-president of the American School Furniture Company, the report of whose



Chas. J. Reed, vice-president American School Furniture Co.

death from pneumonia comes as a great shock to his many friends and associates. The loss of his vigorous personality will be keenly felt in a business way by the company, not less will he be missed as a friend and companion.

Mr. Reed's story is that of the American boy who rose rapidly to positions of great responsibility. He was a native of Chicago, the son of a well-known railroad official who died only a year ago. After graduating from the Chicago high school, in the class of 1877, he was offered a place in the school furniture house of Hadley Brothers Kane, which a little later became the firm of Thomas Kane Company.

Mr. Reed was soon picked out, by Thomas Kane as a young man who was bound to advance and was given work of a very responsible nature. In 1886 he removed to Grand Rapids to take a position as head of the sales department of the Grand Rapids School Furniture Company. In this place he was uniformly successful. He showed a remarkable capacity for the details of the business and he always inspired his associates with a feeling of confidence. In particular he became the right hand man of Mr. G. W. Perkins, the president of the company. Within a short time he was elected secretary of the company and finally vice-president—a position which he held at the time of the consolidation in 1898.

When the American School Furniture Company was organized Mr. Reed was selected the right man to be general manager of the sales department with headquarters in New York. He moved from Grand Rapids to the metropolis and was very happy and successful in his new sphere of management.

January 1, 1901, he came down with pneumonia and, in spite

of the best medical attendance, sank rapidly. His wife and mother were with him at the time of his death.

Mr. Reed had unusual executive ability conjoined with an exceedingly pleasing personality. He was a hard worker but was never too busy for a cheery word. His business was also his pleasure; no man ever liked his work better. He was a typical American business man of the best type. Outside of his life-work he had few interests. No man ever cared less for personal prominence and the advertising that comes from it. He was a faithful member of the Elks and was domestic in his tastes.

Notes of New Books.

Something quite new in the way of language lessons has been worked out by Dr. W. M. Giffin, of the Chicago normal school. After several years of study of the mistakes made by children in the use of language, he arrived at the conclusion that the reasons for correct usage could be set down from the standpoint of the child rather than of the adult. The first step in getting rid of incorrect usage is enlightenment. This is what his little supplementary reader called *Language Reading Lessons* stands for. It is the first book of its kind ever offered to the public. It is also the first book listed by the new publishing house of D. A. Fraser & Company, Boston.

An English Grammar for the Use of Schools, by James M. Milne. This new text-book for grammar and high schools is the product of an author who has not only given special attention to the subject treated, but has successfully demonstrated the value of his method and treatment by thoro, practical use in the school-room during his many years of experience as principal of normal schools.

The book is unusually attractive in appearance, with large, clear, open type, sufficiently differentiated to indicate the relative importance of the various elements, the marginal headings being a helpful feature in this respect. Its principles, rules, inferences, and statements are put forth with a force, terseness, and lucidity rarely found in books on this subject. The form is also attractive and interesting, relieved of routine dullness and mechanical drudgery. The method employed is the *natural linguistic* method; observation is directed, comparison is instituted, and the pupil's assent readily follows. The method is also the *scientific method* of language study, the process being the same, in essence, as is employed in a critical examination of literature or language.

One of the most valuable features of the book is the directness with which the principles are taught. The pupil who studies this grammar will have little to unlearn when brought face to face with the grammars of other languages. Taken all in all, Milne's *English Grammar* presents a luminous and inspiring study of the language, which will make it a delight to both teachers and pupils. (Silver, Burdett & Company.)

Elements of Astronomy, by R. S. Ball. Published by the Macmillan Company. Price, 80 cents. This is a little volume which will find a hearty welcome among students of astronomy. The author treats his subject in a scholarly, yet entertaining manner, and the chapters relating to the sun and moon are especially interesting. In the former, the author devotes several pages to an account of the spectroscopic and its use in revealing important facts concerning the sun; in the latter, special attention is given to the history of the earth-moon system, according to the tidal theory advanced by Prof. G. H. Darwin, of Cambridge.

In the chapter on Mars, prominence is given to the able observations of Mr. Lowell, of the Flagstaff Observatory, who has made a special study of this planet. The chapter on Jupiter, refers to Professor Barnard's discovery of the fifth moon of Jupiter. In connection with this fact, it is interesting to note that the Paris Academy of Sciences on December 17, 1900, conferred the Janssen gold medal on Prof. E. E. Barnard, as a reward for this discovery.

The last few chapters of the book, devoted to an account of stars and nebulae, and the causes affecting the apparent places of the stars, are elaborately illustrated from photographs of great value. These include the celebrated cluster in Hercules, as photographed by W. E. Wilson; the Milky Way near the cluster in Perseus, from a photograph taken by Professor Barnard, November 4, 1893, and the great nebula in Andromeda, also photographed by Professor Barnard.

The book is thoroly up-to-date, and contains the very latest facts and theories which have been advanced during the latter part of the nineteenth century, with regard to this fascinating subject.

MARY PROCTOR.

The School Journal,

NEW YORK AND CHICAGO.

WEEK ENDING FEBRUARY 2, 1901.

Activity in the Great Lake Region.

Chicago continues to be the great experimental center in education. Standstill and walking in ruts are unknown. While new educational ideas are being discussed, admired, and vilipended elsewhere, Chicago goes to work on them and lets their merits show themselves. At present reorganization of the public school system is under way; a new state normal school is to be established within the city limits if Supt. Cooley succeeds in keeping the Chicago normal as a municipal institution; at least forty new schools are to be built in the near future; the stock-rooms of the school board are to be abolished, and text-books and school supplies to be delivered directly to the schools by the companies of which they are purchased; a good bargain has been made in leasing school property to Rand, McNally & Company, for a four-story, fireproof structure, to cost \$400,000; a committee of boys from the Lewis Champlin school presented a plan for securing a playground for themselves and their schoolmates, which was adopted by the board, and promises were made that the work should be done according to the committee's own specifications; hereafter all schools will be equipped with dark green boards in place of the blackboards of the past; lunch counters have been established in the Englewood high school and are proving a splendid success. Besides these matters, which affect largely the external side alone, there are the great departures represented by the Chicago institute, Professor Dewey's elementary school, and Asst. Supt. Speer's exploitation of the play instinct in children. The idea that the common schools might and ought to be made social centers surpassing in efficiency the neighborhood work now carried on by private philanthropy, is finding nowhere readier response. Great is Chicago.

Michigan and Indiana are discussing the introduction of laws providing for the supply of free text-books to the school children of these states. The probabilities are that both will actually give the books to the children instead of merely letting them have a gratuitous use of them. It is to be hoped that the plan will succeed. Aside from hygienic reasons there are several other objections to the usual free-loan system. Let Michigan and Indiana show the way.

Why could not Cleveland adopt a sensible free text-book plan, now that she's finally getting around to practical consideration of the idea? She has remained behind her sister cities in this matter, and now she expects to make a start only by trying a free loan system in a small way in the primary schools.

By the by, Mr. Bell seems to have come to his better judgment with regard to Superintendent Jones. The parents of Cleveland public school children and all friends of educational progress thruout the country are a unit in their confidence in Mr. Jones. Just where the prominent citizens of Cleveland stand may be judged from the following endorsement of his administration which was drafted by President Thwing, of Western Reserve university, and signed by a citizens' committee:

We, citizens of Cleveland, informally assembled, in behalf of our associates as well as ourselves, beg to assure you that the

schools of Cleveland are regarded by us as of such importance in themselves that they should be administered solely with reference to their efficiency as educational agencies for the betterment of the community, and that they should not be regarded in any way as having partisan relationships. We also beg leave to assure you of our confidence in your administration of these schools. To the teachers your guidance is wise and your suggestions made to them from time to time in reference to their work are of inspiring force.

The great educational ideals have by you been upheld with dignity, courtesy, and strength. The course of study is distinguished by the best elements. Your personality is a source of strength to the entire community as well as to the schools. The manner in which you have borne trial and care in these last months awaken our confidence and sympathy. Remaining in your position you can be assured of our support and constant sympathy.

In this most informal, but no less hearty way, we beg therefore to assure you of our confidence and of our desire to co-operate with you in every way lying in our power.

Machine Reading.

Those who have not read the discussion of Machine-Made Reading given in THE SCHOOL JOURNAL last week should not fail to do so. The subject is a most important one. It is time that something be said about the trash served up in the average primer. It would even be better if the children had only word lists and were asked to make their own sentences or "stories," as these are usually called in this precocity-fostering age. The children's productions would be far more interesting than much of the "machine-made" material on the market. THE JOURNAL will have more to say upon this subject in the near future.

The Value of Pedagogy.

For more than twenty-five years there was not a meeting of the N. Y. State Teachers' Association, after the founding of the first normal school, that some one did not rise and vent his spleen by saying, "Thank God, I have not been in a normal school." Possibly there are some yet who would like to utter those words even tho the state has advanced during fifty years from paying \$10,000 per annum for one normal school to paying \$500,000 for twelve such institutions.

The normal school proper may be said to cover the primary stage of instruction in education; it began to be felt, after twenty-five or thirty years, that another step should be taken. There were better conceptions of the importance of education, better ideas as to what the teacher might do in his ministrations and, finally, a belief in a realization of the long hoped for "profession" of teaching.

To effect the needed movement THE SCHOOL JOURNAL, in 1874, dedicated itself in the first issue of the paper—"to a reform in education." It did not propose a new course of study in the schools; it urged that the teacher should study the subject of education, that he should advance, that he should come up higher. The presentation of this thought for ten years produced an effect: Dr. Jerome Allen (who had become associated in the editorship) believed there were enough convinced to inaugurate an organized effort and began a course of lectures that eventuated in the splendid School of Pedagogy that stands as his monument to-day.

All this is well known to many, but late comers into the field will like to see the historical connection. There were many who wanted the needed elevation to take place but were (1) doubtful whether increased study would accomplish this or (2) were unwilling to give that study. It is pathetic to recall instances of men in high places who would purchase Spencer's Education, for example, and who would yet say aside, "It won't do me any good but I will buy it." It was the "voice in the wilderness" of those days (1884). "Buy books on Education" as will be seen by referring to THE JOURNAL.

That there is a serious doubt yet, in the minds of a great many, whether a knowledge of the principles of education together with its history is valuable to the practical teacher cannot be denied. But the movement is well under way. Twenty-five years may be required to effect the needed changes, but advancement is sure to be made.

The work of teaching cannot be left in the 20th century where it was most of the years of the 19th. Roughly speaking, for the past fifty years the teacher obtained his place thru *politics*; the change to be effected is the putting of teachers in office thru *pedagogics*. The pedagogic era has arrived. This the state of New York has felt and said by establishing normal schools. The years are plainly approaching when none but those who are pedagogically prepared are to be allowed to teach.

That there must be special preparation *judicially* for the courts, *theologically* for the pulpit, *medically* for chamber of disease, and *pedagogically* for the school-room is the handwriting on the wall. That there is a willingness to pay a better price for school-room work, provided it is pedagogic, is apparent. The teachers who want the better price must be willing to give pedagogic preparation. Thus it will be seen that while pedagogy has been valued by the public for many years it has come to have a new value to the teacher.

Educational Judges.

Is there any man who does not know how the schools should be run? No; elect a man as trustee, member of a board of education, or give him an opportunity to talk, and he will tell just what should be taught and how it should be done.

When W. H. Wickham was mayor of New York city, he pronounced the kindergarten a "humbug;" Ex-Mayor Hewitt thinks we need hundreds of them.

Controller Coler has joined the vast class of people who think they know just what the schools should teach. He is a man of good common sense, self-made, honest, and self-assertive. If anything should be the matter with his horse he would call in a horse doctor, but he needs no one to advise him about schools and text-books. It is twenty-five years since he was at school and a good many things have been learned since then about education. We respectfully advise him to refer all persons who apply to him for opinions concerning the schools to Thomas Hunter, president of the Normal college and the school superintendents of New York and Brooklyn.

Evening School Attendance.

There is much that goes to show that the problems of the night school have not yet been solved. Only the other day the Philadelphia committee on evening schools, finding a greatly decreased attendance and an apparent lack of interest decided to close up nearly one hundred classes for the remainder of the year. In the latest annual report of State Supt. Stockwell, of Rhode Island, it is stated that the evening schools in the manufacturing cities of Providence and Pawtucket—the very places where such schools should flourish—have never been successful. From Sec'y Frank A. Hill's latest report on the schools of Massachusetts the public evening schools appear to have a very small enrollment—only 30,508 in the entire state—considering the high standing of Massachusetts schools and the great need in industrial centers of post-scholastic education. "In regularity of attendance," says Mr. Hill, "they cannot, of course, equal the day schools,—their percentage being only 53."

The Yale faculty has decided to take no formal action on the recent atrocity, the burlesquing by a society of students of the horrible Bosschietter murder trial. A resolution was adopted stating that "the wrong done by the students is of a kind that can best be dealt with by college public opinion and it is, in fact, being thus dealt with."

Chinese literature is full of proverbs and maxims. Children are made to learn these maxims by heart, and the ordinary grown up Chinese quote them in their ordinary conversation.

Here are a few in common use:

If you bow at all, bow low.

A man thinks he knows, but a woman knows better.

A bottle-nosed man may be a teetotaler, but no one will think so.

If you fear that people will know, don't do it.

No image-maker worships the gods. He knows what stuff they are made of.

Draw your bow, but don't shoot.

Without error there could be no such thing as truth.

Queen Victoria was exceedingly kind to the poor. The queen's last act was one of private kindness. On the Wednesday before she died, and when she was very sick, an old woman wrote a note to her in which she said that her husband was bedridden and without the comforts necessary to withstand the cold. Her secretary, the keeper of her private purse, answered that the queen was very sorry to hear of the sickness of the woman's husband and hoped he would recover. A \$25 note was inclosed.

An enormous meteorite fell in Porto Alegre, Brazil. Its dimensions were 56 feet at the base by 85 feet in height. This is the largest meteorite known. They are classed as meteoric irons and meteoric stones. Copper, lead, silver in varying proportions, and gallium are found in varying quantities in all meteoric irons. Sodium, calcium, and rubidium in minute quantities also. Chromium and manganese are found in the meteoric stones, tho not in the irons. Nickel is found in all specimens. Irons of terrestrial origin can be distinguished from meteoric irons by the absence of nickel and by the presence of manganese.

A young man named Clarence Bush came to Harvard university four years ago, and worked his way thru college by peddling butter. When he began his college work he had little money, and lived in an attic on gruel, sugar, and hot water. An aunt, hearing that he was boarding himself, sent him a tub of butter which he sold. Finding people ready to buy a good article, he bought a few tubs and sold the butter at retail; in three months he had nearly a thousand customers. At first he delivered the butter himself, then got horses, and in six months had five wagons busy. He is now an agent for a New York butter dealer.

The Nichols bill now before the North Carolina legislature provides the benefits of free public education to all the citizens of the state with this novel proviso: The white race shall maintain its own schools from the poll and property taxes paid by the whites and the colored race shall maintain its schools from the poll and property taxes paid by colored citizens. Any special funds not raised by taxation shall be equally divided between the two races.

The interests involved in the text-book business are great, but they frequently assume greater proportions in the popular mind than they deserve. An old bookman who has been at work in Iowa for several years says in a letter:

"You will be surprised to learn that the entire school-book business for the whole state of Iowa does not amount to more than a half million dollars a year. There are more cigarettes sold in Iowa every year than there are school-books. Why is it that a man will spend a dollar for tobacco to be consumed in a few hours and howl when the pride of his household asks for twenty-five cents for a primer, out of which she is to get that which will aid her thru life? The total cost each year does not average a dollar per child. Yet any man will tell you he is paying from ten to fifteen dollars a year for school-books for his children."

It is not generally known that Matthew Stanley Quay, who has just been re-elected to the United States senate from Pennsylvania, was at one time a successful school-master. For two or three years before the war of the Rebellion he taught the village school at Canton, Miss. When the war broke out he returned to Pennsylvania and enlisted in the Union army. It is said, however, that there is to this day a tender sentiment for him in the little Mississippi town. He is still remembered as the ablest and kindest Yankee schoolmaster they ever had. Quay, too, has a sentiment for Canton. Several years ago Mississippi wanted some favor from the senate and secured it thru the influence of Senator Quay, to whom a special petition was addressed by the people of Canton.

A Persistent Mayor.

Each year for five years Mayor McGuire, of Syracuse N. Y., has written to Mr. Andrew Carnegie urging the need in his city of an adequate public library building. The great philanthropist has hitherto replied that he could not include Syracuse in his list of benefactions, but this year he has succumbed and has expressed a willingness to contribute \$200,000 provided the city will furnish a site and will guarantee \$30,000 a year for the maintenance of the library. Great enthusiasm prevails in Syracuse at the prospect.

Steamers on the Upper Congo.

Twenty years ago Henry M. Stanley, who had reached Stanley Pool to begin his five years' work planting stations on the river, launched the first steamer on the waters of the Pool. In the twenty years that have since elapsed Europe has not failed in a single year to send more steamers to ply on the great African river.

There are to-day 103 steamboats traveling up and down the upper Congo and its tributaries or preparing in the shipyards at Stanley Pool for launching. The flotilla has taken a prominent part in the pacific conquest and the economic expansion of the new Congo country. It has been very prominent in the work of exploration and of occupation. Without these steamers it would not have been possible to start so many trading and other stations. They could not, without the steamers, have procured sufficient supplies. The steamers also made it possible to develop the ivory and rubber trades, which have now reached large proportions. The fleet of the Congo Free State numbers twenty-nine vessels; Belgian trading companies, nineteen steamers. In the past two years the French have sent thirty-nine boats to Brazzaville on Stanley Pool, and most of them have been launched. The Dutch traders own ten vessels, the Germans two, and English and American missionary societies have four steamers in their service.

It was a gigantic undertaking to transport the first fifty steamers to the upper river. They had to be carried piece by piece on the backs of men. Not a few of the larger vessels were divided into more than a thousand man-loads; and after these myriad pieces were unloaded at Stanley Pool months were required to rivet them together and prepare the vessel for launching. So, nearly eighteen years were taken in placing the first fifty steamboats on the upper river.

A very different chapter in Congo history has been written in the past two years since the opening of the railroad from Matadi to Stanley Pool. Within that time half of the upper Congo fleet of fifty vessels have been carried on the cars to the Pool. A month was required to carry the earlier boats over the mountains and down into the valleys along the 235 miles between the lower Congo and the Pool; an entire boat is now carried over the route in two days.—*The Sun*.

A party from New York city and vicinity is organizing to go to the meeting of the Department of Superintendence at Chicago, Feb. 26-28. It is planned to leave New York Feb. 25. Those who wish to join the party are requested to write to Ossian H. Lang, 61 East 9th Street, New York.

Letters.

Death of a Veteran Bookman.

The death of Abner C. Stockin at the age of sixty-nine years removes from a life of activity one who for almost a quarter of a century was a representative of Harper & Brothers in New England, and who was himself a unique personality.

It is not too much to say that the advent of Mr. Stockin into school-book agency work marked an era and a new departure. Coming from teaching in a country academy, where his career could hardly be said to have commanded special attention or to have indicated marked success, he gave occasion to the Messrs. Harper to note with unerring instinct the special qualifications which in a few years put him among the foremost agents of the country.

It may truthfully be said that the element of character in its broadest sense was a greater factor in agency work after the advent of Mr. Stockin to the agency force than ever before. The distrust in his own ability which he felt after his work had been under way for a year was immediately dismissed by his shrewd and far-seeing employers who quickly saw that their representative must stand for something besides shiftiness, finesse and that form of craft which should surprise people out of themselves and result for a time in a showy array of business.

The confidence of the old house of Harper & Brother in Mr. Stockin never wavered for a moment during all the long period of his engagement and the relations between the firm and their agent were of that intimate and far-reaching character that enabled them on more than one occasion to profit by his singular power to read and to know men. Indeed their relations were more like those we read of with English firms which have endured for generations and which seem as indissoluble as the solid rock.

For many years Mr. Stockin was the highest salaried agent in New England, and his house seemed entirely satisfied to keep him so. He certainly made their name a household word among the teachers and committees of New England and few agents, if any, ever had so wide an acquaintance based upon the most genial and charming social qualities.

It was this singular felicity of friendship which seemed to differentiate Mr. Stockin from all other agents however accomplished they might be, and which put him upon a pedestal unattainable by others in the same line of work. It may be said also that it was the display of this one trait which knit him so firmly to the affections of his house.

When the Harpers disposed of their educational publications Mr. Stockin went with Messrs. Houghton, Mifflin & Co., where he remained for several years until broken health compelled his retiring.

It is pleasant to add that Mr. Stockin retired on an ample competency.

He leaves a widow, a daughter, and two sons, one of whom is of the firm of Perry Mason & Co., of *The Youth's Companion*.
W. P. A.

Boston.

The death of Dr. Henry S. Foster, at Clifton Springs, N. Y.—the Great House of Health—of which he was director for more than fifty years, will awaken regrets in the hearts of many teachers. He took a special interest in teachers; the writer was under his care when broken in health from over-study and found him a man of the broadest sympathies. He was far more than a physician, he was in every sense of the word a philanthropist; he sought to do good and especially, as he said, "to the good doers." We shall endeavor to describe the Great House of Health in our columns; it should be known to the entire educational world. We only lament that the good and great Foster will be there no more. But he has left a noble name.

Educational Outlook.

Gen. Wood on Cuban School Law.

HAVANA, CUBA.—Gen. Leonard Wood, who has been interviewed regarding Mr. Frye's resignation from the superintendency of schools of Cuba, says that Mr. Frye might easily have remained in the distinct sphere of influence for which his temperament and thinking fit him, had he so desired. But as regards the broad question of school administration, the military government has got to direct the policy of this as of other departments.

Mr. Frye was originally engaged, as Gen. Wood understands it, to be an instructor of the Cuban teachers rather than administrative head of the school system. His emotional temperament qualifies him admirably to be an inspirational force. This was shown in the remarkable expedition of the Cuban teachers to the United States.

No intention of slighting or disregarding Mr. Frye had ever entered the thought of the framers of the school law. His unselfish devotion to the cause of Cuban education was thoroughly appreciated by all the American officers. They have none but the kindest feelings toward him. The only point at issue was that the school policy must be in thoro accord with the general policy of the administration.

Superintendent of Michigan.

Prof. Delos Fall, who took the oath of office as superintendent of public instruction for Michigan, New Year's day, is a Michigan man, having been born near Ann Arbor in 1849. He was reared on the farm, attended the rural school, and his first experience in teaching was two years in district schools. He later entered the Ann Arbor high school, going from there to the university, from which institution he was graduated in 1875. He did post graduate work there in 1882. After graduation he became principal of Flint High school, where he remained for three years, going from there to a professorship in Albion college in 1878. This position he has held up to the present time.

During all these years Professor Fall has been an indefatigable worker on many lines. He has never held a lucrative office, but has been a member of the Albion city council, and member and secretary of the board of education. He has been president of the local board of health, and member of the state board of health for twelve years. His lecture engagements have been very numerous in special courses, sanitary conventions, and educational meetings. He is an active member of the National Educational Association, North Central Association of Colleges, Michigan Schoolmasters' Club, and State Teachers' Association. He was president of the state association in 1897. He has found time to write several textbooks in chemistry, and innumerable articles in papers and magazines on scientific and educational themes.

Professor Fall is one of the few college men who have worked persistently in teachers' institutes, in which field he has been an active, enthusiastic, and efficient worker. His election to the superintendency is a fitting climax to his educational career in the state, and a fine opportunity for him to work out the plans which have been maturing thru these years of work and experience. The state is to be congratulated also on having for superintendent a man who thus honors the office and who brings to it the accumulated power of years of experience and preparation. No man in the state is held in higher esteem by all classes of school men, university, college, public school men, and commissioners than is Superintendent Fall. The educational interests of the state are in safe and competent hands and the outlook is exceedingly reassuring.

Professor Fall has named for deputy commissioner W. H. French, of Hillsdale county. Mr. French is a graduate of the State Normal college and served several years as principal of schools before his election as commissioner.

Retiring Supt. J. E. Hammond becomes confidential clerk to Auditor General Powers. Deputy Supt. D. E. McClure becomes chief clerk in the secretary of state's office.

A New Year's Greeting.

ELIZABETH, N. J.—A pleasant personal letter, written on New Year's day by Supt. W. J. Shearer, went out with the January monthly report of each child in the schools. Mr. Shearer took the opportunity of the beginning of the new century to call the attention of the children to the especial importance of the marks in "Effort" and "Conduct." Nothing, he said, is more important than these, for they will always be considered outward manifestations of the true character.

California Summer Session.

The University of California has engaged six scholars of wide reputation, all professors in Eastern universities, for the faculty of its next summer session, in July and August, 1901. The men who will come to California from other institutions are James E. Russell, dean of Teachers college, Columbia university; John Dewey, professor of philosophy, University of Chicago; H. Morse Stephens, professor of modern history, Cornell university; James W. Bright, professor of English

philology, Johns Hopkins university; Liberty Hyde Bailey, professor of horticulture, Cornell university, and Albert S. Cooke, professor of the English language, Yale university.

Instruction will be offered in philosophy, education, history, Latin, Greek, physics, chemistry, botany, mathematics, and other departments. A short course for farmers is planned, in which practical instruction will be given in horticulture, irrigation, dairy husbandry, and stock breeding.

Chicago Schools and their Teachers.

Philip D. Armour, before his death, arranged for the future of the Armour Institute of Technology, providing for it a permanent endowment of \$1,000,000. It is expected that the school will eventually become affiliated, with one of the two great universities of Chicago.

To Centralize Power.

All the resolutions adopted at the fourth meeting of the committee of one hundred from the civic federation were in the direction of placing more responsibility into the hands of the superintendent. One resolution favored bringing the examination of candidates for the teaching force entirely within the jurisdiction of the superintendent. Another provided for increasing the power of the superintendent in the matter of removal of unsatisfactory teachers.

A committee was appointed to begin drafting the various resolutions of the federation with a bill for the consideration of the legislature. This committee is composed of William Eliot Furness, John S. Miller, and Donald L. Morrill.

Success of Federation Concert.

The Teachers' Federation is popular in Chicago. It gave a concert at the Coliseum, January 18, and scored a tremendous success. Over 8,000 people paid the admittance fee of fifty cents and the federation clears, over and above all expenses, about \$4,000. The audience, as Miss Goggin said, was one that was quite as much interested in taxes as in music. The great fight waged by the federation to enforce taxation of the personality of the big corporations has elicited intense admiration from the citizens.

The feature of the musical program was the Chicago symphony orchestra. Leading performers were Mr. and Mrs. Bruno Steindel, 'cello and piano, Wilson Reed, the boy soprano, O. Rodenkirchen, cornetist, Mme. Eleanora Meredith, and Charles W. Clark.

Money for Improvements.

An increase of over \$1,500,000 on the board's appropriation for educational purposes will make opportunities for many improvements in Chicago schools. It is estimated that about \$700,000 will be used to increase teachers' salaries and that about \$200,000 will go to pay the salaries of new teachers whom the increase in population has made necessary. The various heads of departments are all busy making up their estimates.

The board of education will have about \$3,500,000 to spend on school-houses next year. That means the erection of some twenty-five new buildings besides extensive additions.

Chicago Schools Lead.

"Chicago has the best and most complete school system in the world," said Supt. W. L. Bodine, of the compulsory education department, in his recent address before the Alumnae association. "Chicago, like other cities, has room for improvement in its school system; but its faults are being remedied with great rapidity. While New York now has a bigger system, 'later Chicago' will eventually supplant greater New York."

Among the particulars in which Chicago leads all other cities Mr. Bodine mentioned the free baths in twenty-two of the school-houses, the special department of child-study which works in conjunction with the medical inspectors to safeguard the health of the children; the school for crippled children with the line of free busses to transport crippled pupils to and from their homes; the immense teaching force, larger in proportion to the population than in any other community.

Bay State Items.

MEDFORD.—Prof. Benjamin G. Brown, who has been a member of the faculty of Tufts college for forty years, has resigned his position as professor of mathematics. Prof. Brown is a native of Marblehead, and a graduate of Harvard, class of 1858. He was for three years principal of the Marblehead academy, and he began his work at Tufts in 1861, as tutor in mathematics. In 1865 he became Walker professor of mathematics, and he had charge of physics also until the election of Prof. A. E. Dolbear in 1874. He has been a very successful teacher. His successor has not been elected.

QUINCY.—The Alumni Association of the high school held its annual meeting on January 23. The evening was mainly given to social intercourse, with a business meeting to elect officers. Miss Mabel Ellery Adams was chosen president for the next year.

NEWTON.—Prim. George A. Moore, of the Hyde school Newton Highlands, has resigned on account of ill-health, to take effect at the end of the present term. The school committee on January 23 voted down a proposition to make a general

test, by cultures, of the condition of the throats of the pupils in the schools, to determine the existence of diphtheria.

BROOKLINE.—Friday, January 25, was observed as "Senior day," in the Brookline high school, the class entertaining parents and friends. Among other literary exercises, there was a debate of marked excellence, upon the question, "Resolved, that permanent retention of the Philippine islands by the United States is desirable." The literary program was followed by exercises in the two gymnasias, the boys directed by Mr. Schmidt, and the girls by Mr. Hartwig Nissen.

AMHERST.—At the alumni meeting held in New York January 24, President Harris announced that the addition of \$100,000 to the general fund of Amherst college has just been completed. Of this sum one-half is given by Mr. D. Willis James, and a quarter by Mr. Charles M. Pratt. This addition will prove a great aid to the college.

Education in Massachusetts.

The sixty-fourth annual report of the state board of education was presented to the Massachusetts legislature Jan. 16.

The proposed increase of the state school fund to \$10,000,000 is discussed at some length, and the conclusion is reached that it will not be necessary or desirable, in case this increase is made, to try to secure a uniform school standard throughout the state. Massachusetts has always stood strongly for autonomy of the towns and against the idea of excessive state control.

A few facts of interest about the schools are as follows:

The public schools have been kept on an average nine months and nine days,—an increase of one day; the high schools, nine months and ten days,—also an increase of one day.

The number of public school teachers for the year was 13,575, of whom 1,196 were men and 12,379 were women, the proportion of men to women being 1 to 10.2 as against 1 to 9.5 ten years ago. This, says the report, is a questionable trend, not that women do not make excellent teachers, but that the schools cannot afford to dispense so fully with the services of men.

Of the total expenditure (\$10,677,485.74), 74 per cent. was for teachers' wages, 12 per cent. for fuel and care, 6 per cent. for text-books and supplies, 3 per cent. each for supervision of schools and for supplies, 1 per cent. each for conveyance of children and supervision by school committees. That means that 96 per cent. of the total expenditure goes directly to the schools and only 4 per cent. to their supervision. Only \$267,505.58 is raised from other sources than local taxation.

Five years have elapsed since the standard of admission to the normal schools was raised. Massachusetts is the only state in the Union that places all its normal schools distinctly above its high schools and in line with the colleges. The average number of admissions during the five years of the new policy was 56 per cent. higher than during the last five of the old; of the last year of the new policy, 79 per cent. higher than the first year of the new. Last year 950 candidates, including a few for preliminary examinations, were examined, of whom 819 were admitted. The total number of students was 1,712,—the largest in the history of the schools; and of graduates, 537,—also the largest in their history.

Boston Doings.

The school board asks the legislature for authority to borrow \$150,000, to improve the protection against fire in certain school-houses; also \$400,000 for improved sanitation and ventilation.

Misses Katharine R. Haley, Mary C. Leonard, Katharine T. Lyons, Mary A. McKinley, Anna M. Meyer, and Charlotte E. Romer have been appointed substitute teachers in primary and grammar schools.

On January 21 a reunion of the graduates of the Chapman school was held at East Boston, the meeting being preliminary to a larger meeting in connection with the dedication of the new school-house. The whole affair was informal. Hon. Eben M. McPherson made a brief speech, mentioning the fact that the day was the fiftieth anniversary of the opening of the school, and tracing its growth in the half century.

The Public School Art League held a meeting in the Francis Parkman school, Forest Hills, on January 19, with addresses by Supt. Seaver, J. Frederick Hopkins, director of drawing, Dr. Elizabeth C. Keller, of the school board, and Masters John T. Gibson and Alonzo Meserve. They all commended the elevating influence which the use of decorative art in the schools exerts upon the pupils. This school is not far from the former home of Francis Parkman, the historian, in whose honor it was named. The building stands on a commanding site, and the interior is ornamented by about seventy works of art. Some of these commemorate the life of the historian, others pertain to the history of our country, while still others relate to the history of Greece, Egypt, and Rome.

The High School Masters' Club of Massachusetts met at the United States hotel on January 19. Prin. Enoch C. Adams, of Newton, presiding. Following a dinner, which was served at ten o'clock, Prin. E. R. Goodwin, of the Worcester classical high school, spoke on "Special Pupils in High Schools." He held that pupils should have the privilege of pursuing any course of study offered, whatever might be their conditions. Separate classes should be formed for pupils who do not ex-

pect to have time to complete the whole course, so that the instruction can more closely meet their needs. Pupils unable to keep pace with the class, either thru a more slowly-acting mind, or because of the necessity for doing some sort of work to pay their way, should be allowed to spend more time in the course. Such pupils often prove the very best in the end.

Head-Master Charles M. Clay, of the Roxbury high school, spoke of the steps thru which the high schools have passed in the development of their present courses; they are becoming more and more the real places of preparation for life. Special students are of two classes, the "discredited" and the "accredited." The former have either laziness or incompetence as their characteristic. Most of them become specials simply thru dropping a subject that they dislike. The latter class are mainly pupils who cannot pursue the full course, but can take one or more branches. They are usually among the very best students in the subjects taken, they gain much from the opportunity so opened to them, and they are a credit to the school. The elective system exactly meets their needs.

Prin. W. C. Akers, of Holyoke, read a paper upon "First Year Failures in High Schools." He adduced several reasons for the large number of pupils who fail in the first year. Among these are the many pupils who go to the high school only because their parents put them there; the large number who are careless and unpunctual in all their habits; and the fact that many go to the high school utterly incapable of doing the work required. The lack of training and experience on the part of teachers has also much to do with the evil. The pernicious custom of placing the teaching of the entering class largely in the hands of the young and inexperienced should be done away with, and the very best teachers should be assigned to this class.

Mr. Alexis Frye, late superintendent of schools in Cuba, has returned to Boston with his Cuban wife. He was graduated from the English high school in 1878, and on the evening of January 24 his former classmates tendered him and his wife an informal reception at the Parker House, which was very fully attended. His friends showed their appreciation of the work which he has done for education, and his success as an executive in the schools of Cuba, by presenting him a beautiful cup with an appropriate inscription.

Other New England Notes.

PROVIDENCE, R. I.—Prin. Walter B. Jacobs, of the Hope street high school, has been chosen professor of the science and art of teaching in Brown university. He is to commence his duties in September, and in the mean time is to travel in Europe. He was graduated in 1882. Dr. John E. Bucher a graduate of Lehigh university and at present one of the faculty of the Rhode Island College of Agriculture, has been chosen assistant professor of chemistry in the university.

NEW HAVEN, CONN.—The late Mr. Albert A. Kent, of Chicago, who built the Kent laboratory twenty years ago, left a bequest of \$50,000 to the university. This sum will be used to enlarge the laboratory to about double its present capacity. The addition will be made in such a manner as not to change the architectural effect of the building.

NEW HAVEN, CONN.—The will of Albert Emmett Kent, of Chicago, devises \$50,000 to Yale university for the purpose of completing the Kent laboratory. The gift is conditioned on the provision that no change be made in the plans of the building already adopted.

BURLINGTON, VT.—The University of Vermont has established a department of commerce. It was rendered possible by the gift of \$50,000 from John H. Converse, of Philadelphia. The head of the department is Prof. C. E. Seaman, lately of the Harvard graduate school.

Dedication of a Jersey City School.

The dedication exercises of new school No. 20, which takes the place of old No. 20 burned February 13, 1900, were held in the assembly room of the school just completed Friday evening, January 25. The school was brilliantly lighted thruout, and was open to the public for inspection. Since the old school was burned the pupils have been transported in special trolley cars to School No. 15, at the city's expense, the pupils of No. 12 occupying the building from 8-30 to 12-30, and those of No. 20 from 1 to 5. The new building is exceedingly attractive in appearance, contains every modern convenience and equipment, is the peer of any school building in the state, and one of which the citizens of the whole city can justly be proud. It contains twenty-six class-rooms, and will accommodate nearly 1,500 pupils, about the same number as the old school.

The exercises were of an interesting character. The presentation of the school to the city was made by Director George F. Witt, chairman of the committee, and Mayor Hoos received it on the part of the city. Addresses were made by President Mulvaney, of the board of education, Supt. Snyder, Senator Hudspeth, and others. After the exercises a banquet was served in the basement of the building. The venerable and popular principal of old No. 20, J. C. Rineheart, is to be continued as principal of the new school, which was opened for the reception of pupils Monday, January 28.

In and Around New York City.

Governor Odell never loses an opportunity to impress his theory of economizing in administration. At the New York dinner of the Dartmouth Alumni he said, "I am learning a whole lot about education. I have learned that we have more scholars and also more lunatics in the state, and that it costs about twice as much to maintain the latter as the former. I hope that I may be able to impress some of my ideas in regard to taxation, and to show that there seems to have been extraordinary lavishness in the care of the insane and extraordinary parsimony in regard to education."

ALBANY, N. Y.—Assembly Juengst, of Kings borough, has introduced a bill providing for a five-cent fare for round trips for school children on street, surface, and elevated railroads in cities of the first class. These are to be good between the hours of 8 and 9 in the morning, 12 noon, and 1 in the afternoon, and 3 and 4 in the afternoon.

Mayor Van Wyck received a delegation of students from Muhlenberg college, Allentown, Pa., January 23. He told them that New York was not only the biggest but also the best city in every way in the western hemisphere.

About his refusal to lower the city flags in condolence of Queen Victoria's death he told the boys nothing.

The Boys' high school is not going to be built at Fifteenth street and Livingston place. This is the second site that has been judged unsuitable. Authorities are now looking for a favorable location somewhere in the central part of the city below Fifty-ninth street.

Precautionary measures are being taken in a number of the buildings in Brooklyn, erected prior to consolidation of course. The principals have been advised to discontinue physical exercises such as jumping, vaulting, marching in unison. The buildings are not actually in danger, but it is just as well to be careful.

Printed announcements of the second annual summer session of Columbia university will be out very shortly. The term opens Monday, July 8, and closes Friday, August 16. An increase in the number of courses is announced. Many of them have been specially formulated to meet the requirements of the New York board of examiners for higher licenses.

A special class in architecture for artists and art teachers has been started at the Art Students' League, 215 West 57th street. The aim of the league in establishing this class is to give students an opportunity to acquire such a knowledge of architectural principles as the painter or illustrator ought to have. The class will be under the direction of Mr. Henry F. Harnbostel, instructor in architecture at Columbia university. Criticisms are given Monday evenings.

Davis Law Safe.

The Albany special correspondent of the *Commercial Advertiser* writes that after a great many interviews with prominent legislators he is convinced that the Davis law will not be repealed, whatever charter legislation takes place. No member has been heard to announce his antagonism to it, and men like Senator Audette and Senator Elsberg have declared that they will defend it with all their influence.

School Finance Troubles Ended.

Mayor Van Wyck, Controller Coler, President O'Brien, of the board of education, and Mr. Richard H. Adams, of the school building committee, have held an amicable conference, and seemingly have buried all the hatchets they had out for each other. None of them would give out a statement of the things said and agreed upon in the conference, but each of them admitted that henceforth there will be close consultation between the school bureau and the finance department.

English Poorly Taught.

Supt. W. H. Maxwell, in his annual report for the year ending July 31, 1900, which has just appeared, makes some very severe criticism of the teaching of English in New York schools.

Too many teachers, he says, in their instruction in composition are considering only external appearance. They strive to get beautifully written and symmetrically arranged paragraphs rather than to teach how to spell and to punctuate with real intelligence, and to show to a superintendent neat-appearing compositions rather than to train their pupils to habits of clear and effective teaching. Such teachers are apt to be over-conscientious in the matter of corrections and re-copying of compositions; they neglect none of the letter, but too often all of the spirit of the law.

Nor are the teachers altogether to blame. To secure the best results we should have a lengthening of the school course to eight years, that there may be time for doing properly all the work that ought to be done.

Fundamentally the theory is to make the chief aim and the final test in all English teaching not show exercises of any kind whatever, but the possession by pupils of the power to use the English language.

The manual training also is severely criticised. The shop-work and free-hand drawing are distinctly good, but the mechanical drawing and paper-cutting have degenerated into mere dictation exercises. Every line, every cut is made at the command of the teacher. The pupils do not know what they are doing, nor do they seem to care.

This state of things can be improved with an eight years course.

Pres. O'Brien on the Davis Law.

At the annual dinner of the doctors of pedagogy of New York university Jan. 26, Pres. Miles M. O'Brien, of the board of education, declared his unqualified approval of the Davis law and gave an expression of his policy as regards the size of classes. He asserted that no teacher, however competent, can be relied upon to teach sixty pupils in a class. Individual teaching is, under such conditions, an impossibility. Forty pupils to a teacher ought to be the limit.

Of the Davis law Mr. O'Brien said that a year ago he stood opposed to it because it hurt the principle of home rule. Today, however, he is absolutely and irrevocably in favor of keeping it on the statute books. It gives assurance that there will be enough money to pay the teachers' salaries. That assurance is the first requisite in developing a modern school system. Teachers who study in their leisure, who read books and periodicals bearing upon their professional duties, ought at least to know that their salaries are coming to them with regularity.

This meeting of doctors was well attended. Among the other speakers were Dean E. R. Shaw, of the school of pedagogy, Mr. Willis F. Johnson, of the New York *Tribune*; Prof. L. S. Thompson, of Jersey City; Prof. C. H. Judd; Prof. F. Montaser, and Associate Supt. E. D. Shimer.

City College Overcrowded.

The annual dinner of the alumni of C. C. N. Y. was held Jan. 26. Prof. Alfred G. Compton, of the college, took advantage of the occasion to call attention to the intolerable crowding of the college building. Class rooms intended for the instruction of twenty-five pupils are filled with ninety, some pupils even having to stand. There is need of a physical laboratory, of an observatory, and of a modern library-room.

Prof. Compton closed his address by saying that any other single college in the country could close its doors with less hardship to the masses than if the college of the city of New York were discontinued. It furnishes a higher education combined with admirable discipline to the sons of poor parents. For eight years the need of a new building has been cryingly apparent.

Distinguished speakers at this dinner were Gov. Odell and his father; Prof. Michael I. Pupin, of Columbia university, who has recently invented the submarine telephone; Dr. Robert F. Weir, president of the Academy of Medicine, and Senator M. A. Elsberg.

The Ethical Culture Schools.

A course in normal music training will be given at the Main school, 107 West 54th street, during February and March by Miss Marie Ruef Hofer, of Chicago. The essentials of music training from the kindergarten to chorus conducting will be considered. This work is especially adapted to grade teachers and supervisors.

The normal classes of the City History Club meet for the remainder of the season at the Fifty-fourth street school. The two lectures still to be given are as follows:

Jan. 21.—The Revolutionary Period, Mr. W. H. Nichols.

Feb. 4.—The National Period, Miss Elizabeth M. Crouse.

Teachers and others interested are cordially invited to attend. Supt. John F. Reigart has been making an investigation into the handiwork performed by the children of the schools at their homes. He finds that the amount of this voluntary manual work is very large. The value of the regular school training in shop-work and sewing is conclusively shown by both the excellence of these home productions and by the fact that the children do at home about the same kind of thing that they have been taught to do at school. For instance, no whittling is taught in any of the classes, and in the voluntary work collected by Mr. Reigart not a single specimen of knife carving is found.

A great deal of this home work was done just before Christmas in preparation for the gift exercises at the Christmas tree. No presents were hung that were not actually made by the children.

Newark Wants a Normal School.

Assemblyman Bachellor, of Essex, has introduced into the New Jersey legislature a bill carrying an appropriation of \$200,000 for a state normal school at Newark. This measure has several times come up in previous years and has been buried in committee, but a number of the Newark educational people believe that there is a chance of getting it thru this season. There is a strong feeling that the proper place for a new normal school is in the greatest center of population in the state where the largest number of people can send their children to the school without having to pay their board in another city.

The School Community Plan.

Editor Ossian H. Lang, of THE SCHOOL JOURNAL, gave atalk Saturday morning, Jan. 26, before the New York University School of Pedagogy on "The School Community." Two classes, those of Dean Edward R. Shaw and Prof. F. Montaser, had been thrown together for the lecture and the general public invited. After a brief address by Dr. Montaser, who traced the growth of educational thought from the extreme individualism of the last century to its present preoccupation with sociological ideas, the speaker of the morning was introduced. He said in substance:

The school community idea involves nothing less than a complete re-organization of society upon lines already laid down in the development of the common school. No radical departure is involved, but only an outgrowth of evolution. The common school idea is susceptible of becoming a great regenerating force.

Nothing else can so readily unite mankind upon the plane of social service. One tendency of religion when active and militant is to divide rather than to unite. Religious unity has heretofore been characteristic of periods of intellectual stagnation. As soon as men begin to think upon matters of transcendental import, they begin to disagree. There has been a marked growth in the number of religious sects during the last decade.

The thought of social service is in the air. It is a well defined and definite sentiment. Where should this sentiment be seen crystallizing into action? Above all places in the common schools. In parents' meetings, free lecture courses, school libraries, mothers' associations, we see the beginnings of a community that has the school-house for its center. The beneficent work of these organizations is already felt. The free lecture courses in New York City are giving stimulus and inspiration to thousands of people who otherwise would be spending their leisure in the midst of deadening and often noxious pleasures. If this system had been in operation for the last twenty years, would there now be the crying need there is for a crusade against vice? The boy from the country or from another city coming to New York feels the need of social recreation. Too often he finds it in the saloon or the brothel. He is unwatched and without interests outside of his daily work.

The Open Door in the City.

For him and for others the school building ought to exist as a sort of club house. Night and day its doors should be open. Selfishness will bring the people of a neighborhood to school

if they find they can get something from it. Selfishness is a great motive power for the school reformer to use.

To-day when a child leaves the common school he leaves for good and all. The college men after graduation have their clubs, the high school graduates their alumni associations, institutions which, tho often ineffectual, do a little to keep up old associations. The boy from the grammar school goes out and is completely forgotten. Now the school community as it develops will promote fellowship in two directions. It will strengthen the bonds of union that already exist among the children of a school and it will keep the bonds intact after the children have grown up.

The Social Instinct of Children.

It is a matter of experience that children love to effect organizations. The club spirit is developed very early in them. Oftentimes the guidance of a teacher is not necessary; they can carry on their societies unaided.

Now the school to do its best work must take advantage of this social disposition among children. In the school community of the future there will be numerous associations of children who have similar tastes. Those who like history will organize a society for the study of local history. The collectors of postage stamps will have their club with regular meetings. The amateur photographers will also be banded together. This is the essence of democracy, the union of those whose tastes are similar irrespective of circumstances of wealth, birth, and privilege.

Such associations will not, however, be isolated groups. They can often work in conjunction. The students of local history, for instance, can call in the assistance of the amateur photographers in arranging for exhibitions of pictures of famous localities. The committee on geography can join with the collectors of postage stamps. A complete system of interdependence can easily be worked out.

The children, then, will have been organized in school. If a boy goes elsewhere he carries with him not only a certificate of his standing in his studies but letters that will entitle him to admission into other branches of the associations to which he belongs. His tastes will be foreknown in the new school by the associations he has already formed in the old. Nor when the lad goes out to work will his name be forgotten. He still can meet at the school his former companions. There will be alumni associations to which he may belong. If he goes into another community he takes letters with him. He cannot, unless he wilfully wishes it, be lost to view. Moreover, where a child leaves school after an incomplete course, the school laws of the future are going to provide that the work left un-

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Davis' Physical Geography

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One of the happy features of the book is a simple yet interesting style which adapts it to the use of those who have not had courses in geometry, physics, chemistry, astronomy, or geology. The book is richly supplied with illustrations engraved from photographs, includes numerous type-forms, and has many maps and charts of the highest value.

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done must be made up in night schools or continuation schools. It is the duty of society not to burden itself with imperfectly educated individuals.

Its Place in Charitable Work.

The value of the school community in the conduct of charitable work will speedily appear. Why is it that money is expended where it does no good and hundreds of thousands of really deserving cases get no help? One explanation is that there exist no organizations that are numerous enough and strong enough to keep track of the individuals of society. For instance, in a certain section of a large city there are less than fifty churches to several hundred thousand people. In such a case the unit is too large. The school-house unit is small enough to make possible an accurate surveillance. In the school community a committee can look after the cases of destitution in its district. Provision can be made that no child loses the benefits of education thru lack of proper nutriment. To-day millions of dollars' worth of education are thrown away upon children who are too underfed, too badly clothed and bathed to receive it.

The School Garden.

The school community in rural districts will be developed along lines that will render country life richer and more interesting. A particular form of development of which a great deal can be made is a school garden, a subject at present exciting considerable discussion. The cultivation on scientific principles of a little plot of ground by the pupils in a country school will be of immense educational usefulness in that the proceeds from the gardening can be applied either to charitable purposes or to the purchase of school equipment.

Art will play a most important part in every school community. We are already getting away from the ideal of the art collector, who gathers a number of choice works of art to put into his private gallery where they will be seen by perhaps one hundred people in a year. We are slowly approaching the Greek idea of art for all. In the best days of Greece it was esteemed a wrong for a private citizen to hold a beautiful work of art for his own delectation. In the school-house of the school community will be placed original pictures and statues put there as private contributions. Music, too, will be cultivated as never before. Where great performers cannot be obtained there will be reproductions of the world's greatest music, thru the medium of self-playing instruments.

In general all the educative instrumentalities of the community will be centered in the school-house. Information bureaus, mothers' clubs, village improvement societies, pub-

lic education societies,—all these organizations which have sprung up in a sporadic way will be grouped and unified. Even the hospitals will be brought into connection with the school system and be made to contribute to the educational whole.

Mr. Lang's address was along the lines of the series of articles on "The Common School as a Social Center," which began in THE SCHOOL JOURNAL of Jan. 5.

F. C.

Death of Charles R. Abbot.

A well-known Brooklyn principal, Charles R. Abbot, who had been principal of Grammar school No. 1 for thirty-one years, died January 18. He was graduated from the Albany State Normal school in 1847 and first taught in Westchester county; from 1859 to 1862 he was principal of the Farnum Preparatory school at Beverley, N. J.; from 1862 to 1869 superintendent of the Kingston schools, when he came to Brooklyn. Dr. Abbot became interested in the effort made by Dr. Jerome Allen, editor of THE SCHOOL JOURNAL, to establish higher pedagogical instruction by founding the School of Pedagogy, (now a branch of the New York university) and was one of the first body of graduates to receive the new degree of "Pd. D."

Dr. Abbot clearly perceived the importance of the "new movement" pertaining to the higher instruction of teachers far better than might have been expected from one who could hope for no further emolument by means of it. Being a popular principal in Brooklyn he aided the cause greatly by his adhesion to Dr. Jerome Allen's efforts. That a principal of twenty five years standing was willing to admit there was something to learn, and to sit in a class with others of far less experience, listening to expositions concerning Pestalozzi and Froebel was an object lesson that produced effective results. The School of Pedagogy was, in a sense, "fathered" by Brooklyn teachers; Brooklyn furnished many of the graduates of its first years. The new effort might have languished had not the deceased principal lent his influence at the outset.

Dr. Abbot's special ability lay in producing an orderly procedure in school exercises. He believed the teacher should be a superior person, and deal with more than the rudimentary knowledge required to obtain a license.

He had become an Episcopal minister, many years ago, and often officiated in St. Mark's church, in Adelphi street. He was twice married; his second wife survives him. He had a pleasing manner and was exceedingly popular among his colleagues. His sympathies were broad; he attached great value to religious culture for youth.

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The Baron De Hirsch School.

Plain and severe in appearance and admirably adapted for its purposes, the new Baron De Hirsch Agricultural and Industrial school, at Woodbine, N. J., stands dedicated to a most useful work. It is large enough to accommodate about 500 boys and girls of Jewish parentage. It is likely to do a great deal toward inducing young Hebrews to take up the profession of farming.

The dedicatory exercises, held the last Sunday in November, was largely attended by prominent Jewish people from New York, Philadelphia, and intermediate cities. In the absence of the Hon. Myer S. Isaacs, president of the Baron de Hirsch fund of the United States, Mr. Henry Rice, of New York, presided. The invocation was by the Rev. Dr. Berkowitz, who chose for his text, "Borach habo b'shem Adonai: May the blessing of God be upon all come hither."

The new building was formally presented by the chairman of the Woodbine committee, Mr. W. B. Hackenberg, who spoke interestingly of the experiences of the pioneers who found at woodbine simply 5,000 acres of scrub oak, all of which had to be reclaimed. Fraternal encouragement was given by Prof. E. B. Voorhees, director of the New Jersey State Agricultural school; his address was followed by one of great power from Prof. Hirsh L. Sabsovich, dean of the Woodbine school faculty. Others who spoke were Prof. Joseph W. Pineus, of the Woodbine school; Leo Hirsch, a pupil of the senior class; Mr. Adolphus S. Solomons, general agent of the Baron de Hirsch fund; Charles Hoffman, Esq., and Rabbi B. L. Levinthal, of Philadelphia.

The great success of the school so far has been largely due to the tireless, enthusiastic efforts of the superintendent, Prof. H. L. Sabsovich, a native of Russia and a graduate of the Zurich Polytechnicum. His plan of combining manual training with an agricultural education comes from Russia, and the practical experiment has been tried, in the United States, only in his school.

The great need of the Baron de Hirsch school has been a principal who should act in constant co-operation with Professor Sabsovich. This need has been recently supplied by calling to the school in the capacity of principal, Dr. Boris D.

Bogen, who has been for several years instructor in the Hebrew Technical institute, of this city. Dr. Bogen is also a Russian by birth and education, and he had some valuable experience as a teacher in his native country, where he labored in the school founded by Tolstoi. Altho he has been at Woodbine only since September, Dr. Bogen has introduced military drill into the agricultural school, organized a chorus, arranged a course of study, and laid out the school work in a practical way. His energy and enthusiasm have brought him golden opinions from all the friends of the school.



The Baron de Hirsch Agricultural School, Woodbine, N.J. Dedicated Nov. 24, 1901.

The pupils are in the best of spirits, satisfied, and enthusiastic. Under Dr. Bogen's direction they have started a school paper, a dramatic society, and a debating club. All in all the prospects of the school are excellent. It is doing a great work and its field of usefulness is certain to widen as the years go by.

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Interesting News from Everywhere.

A strong program has been prepared for the meeting of the Eastern Manual Training Association at Buffalo, June 27-29. A thoroughly representative exhibit is being arranged and the co-operation of all the Eastern schools is desired. As there is a probability that the city will be overcrowded, on account of the Pan-American exposition, it is suggested that those who expect to attend will do well to secure their accommodations as early as possible. Very good arrangements can be made thru the organization perfected by several of the Buffalo principals for the entertainment of guests—the details of which can be secured from Daniel Upton, director of manual training, Buffalo.

NEW HARTFORD, N. Y.—An appropriation of \$22,000 for a new school-house was carried at a meeting of the taxable residents Jan. 18.

DARBY, PA.—The danger arising from poor plaster ceilings in school-houses has been illustrated by a recent occurrence at the Ridge avenue school. A fall of plaster took place in the primary room, the teachers dragging out several pupils barely in time to save them from injury. The janitor, who appeared on the scene to investigate, was caught in the fall and knocked senseless.

ALFRED, N. Y.—A summer school for beginners in ceramic art will be held at Alfred university during July and August. It will be under the direction of Prof. Charles F. Binns, director of the New York state school of clay working and ceramics. Alfred is one of the great centers of the pottery interests of the country.

BALLSTON SPA, N. Y.—A meeting of the teachers, trustees, and patrons of the public schools was held Jan. 26, at the Ballston Center church. An interesting program explaining the various features of school work had been prepared by the teachers.

NEWBURG, N. Y.—Night schools have been reopened here after a lapse of fourteen years. Back in the eighties they were started but were never successful. Of late years Newburg has become more of a factory town than it formerly was, so that the need of evening classes is more apparent.

ROCHESTER, N. Y.—The surplus of \$81,000 left over from last year's account cannot, according to a decision of the corporation counsel, be appropriated by the board of education for a new high school. It reverts like any other surplus to the city's general fund, whence the common council may, if it choose, appropriate it for a high school or for any other purpose.

SYRACUSE, N. Y.—The board of education at its meeting of Jan. 15, elected Daniel Rosenbloom president for the fourth time. Two new high school appointments were Miss Martha O'Brien to teach physiology, Miss Caroline S. Spencer, Latin and Greek.

BUFFALO, N. Y.—Mr. George H. Kennedy has been appointed a member of the board of school examiners in place of Mr. Timothy J. Mahoney, who, as previously announced in THE SCHOOL JOURNAL has become commissioner of public works.

SAN FRANCISCO, CAL.—The students at Leland Stanford, Jr., university are very much divided in opinion regarding the repeated resignations of professors. A group of those who uphold President Jordan and Mrs. Stanford recently ducked a student from Kansas who has been guilty of a good deal of treasonable talk against the university authorities.

The vacancies caused by the resignations of Messrs. Howard and Spencer have been filled by the appointment of Professors Lapsey and Warren, of Harvard. These gentlemen are now on their way to Stanford.

The trustees of district No. 7, town of Bethel, New York, have been sued for infringement of patent No. 346,860, granted to Isaac Osgood.

The bill of complaint was filed December 14 last, in the office of the clerk of the United States circuit court for the southern district of New York, at New York city.

It is understood that the school desks which are claimed to infringe, are what is known as the "Century Automatic," made by the Century Seating Company, of Chicago.

BAYONNE, N. J.—The school board has succeeded in bringing the specifications for the new public school No. 8 down to such a point that they are likely to be able to get the school-house built for the sum of \$70,000, which they have appropriated. The original specifications called for so much that when the bids were opened not one of them was within the limits. Then all the bids were rejected and a special committee was appointed to alter the plans.

THE SCHOOL JOURNAL

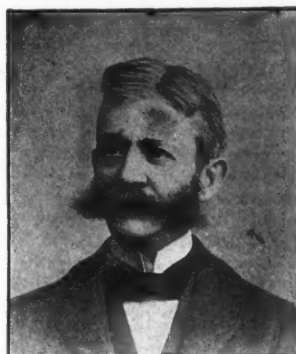
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Recent Legal Decisions.

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Wrongful Discharge.

An action was brought by a teacher who was employed to teach in a certain department of a public school to recover damages for wrongful discharge. The school board urged in defense that the teacher had been offered a position to teach in another department of the school, and that her dismissal was virtually a transfer. As it appeared, however, that the contract which had been drawn to suit the former position would not fit the conditions of the new position, judgment for the plaintiff was affirmed. *Jackson vs. School District Ac. Iowa S. C., June, 1900.*

Tenure of Office.

The act of the Texas legislature, March, 1899, establishing a uniform method of electing school trustees and giving a four-year term to trustees, is void. The state constitution provides that the duration of offices not fixed by the constitution shall never exceed two years. Furthermore, the trustees of independent school districts, being authorized to exercise exclusive control over the management of free schools within their district and to hold title to school property, are to be regarded as public officers, tho receiving no compensation for their services. Therefore, the legislature, under the power to maintain a system of schools, could not give a four-year term to the office of school trustee created by it. *Kimbaugh vs. Barnett. Tex. S. C., May, 1900.*

Dismissal and Damages.

A school board that has once recognized a person acting under a contract as a teacher and has paid salary for such services, is estopped, when the teacher brings action for breach of the contract, from entering the plea that the contract was entered into by the individual members comprising the board without meeting and acting as a board.

Under a statute authorizing school boards "to employ and discharge teachers, it is not necessary that the members shall meet and act as a board in order to make a valid contract with a teacher where they all assent to the employment. Therefore, in an action by a school teacher, after dismissal, for breach of contract, where the school board refuses to let the teacher complete her term and sets up that she is incompetent, they assert such incompetency only by complying with the statute (see §3055) which provides that "no teacher shall be dismissed without due notice and good cause shown." Failing in this, the answer in defense falls and judgment for the teacher is affirmed. *School District Ar. vs. Stoner, California S. C., April, 1900.*

Note: Courts have frequently held that where a majority of a school board has authority to employ a teacher, a contract signed by a majority of the board is not, because of the failure of the remainder to sign, invalid.

City of New Orleans Loses.

The case of several New Orleans teachers who were suing the city for unpaid salaries went as high as the United States supreme court for settlement. The city of New Orleans was required by the state constitution of 1898 to examine certain claims for payment and for such as might be found to be justly due to issue warrants, these to be paid by the city board of liquidation. Funds for the settlement of such claims should be provided for by the sale of a sufficient number of the constitutional bonds of the city issued under Act 110, of 1890.

These claims the board of liquidation would not pay upon the ground that the sale of bonds to pay the teachers would operate to the prejudice of other creditors of the city. The supreme court of Louisiana ordered a sale of the bonds in question. This judgment was resisted and the authority of the United States supreme court involved. There the Louisiana judgment was in part confirmed. The sale of the

bonds was ordered, but with the provision that the board of liquidation may affix to each bond a statement that it is issued in virtue of the authority of the new state constitution and as a result of a command from the supreme court. In this way takers of the bonds may have notice of the legal authority under which they are issued, and the inconvenience of possible wrong can not arise.

Power to Remove School-Houses

1. Under the Kansas law (St. 1897 c 63) providing that the inhabitants qualified to vote at a school meeting shall have power to designate by vote a site for a district school-house, a new site for a district school-house may be designated, and the school-house ordered to be removed thereto, by a majority vote of these present and voting at the annual school meeting; and the contention that the authority to designate, having been once exercised, ceases to exist, cannot be sustained.

2. The appraisers provided for in the law to appraise the school-house and property, prior to taking a vote on removing to a new site, may be legally elected at the annual school-district meeting by a majority of those present and voting.

3. A wife living with her husband, upon land owned by him, and occupied by them as their homestead, is a freeholder qualified to act as an appraiser of a school-house, prior to taking a vote on its removal to a new site. (*Moore vs. State, Kansas S.C., Oct. 16, 1900.*)

Choice of a School Site.

Under the Kentucky law (Pub. St. sec. 4439), providing that the trustees of a school district shall select the site for a school-house, and that a majority of the school electors may prosecute an appeal to the county superintendent, whose decision shall be final, the only power the superintendent has upon appeal, is either to approve or condemn the site selected; and, in the event of disapproval, the trustees must select another, and so continue until a site is selected from which no appeal is taken (*Davis vs. Humphrey, Ky. C. of App., March, 1900.*)

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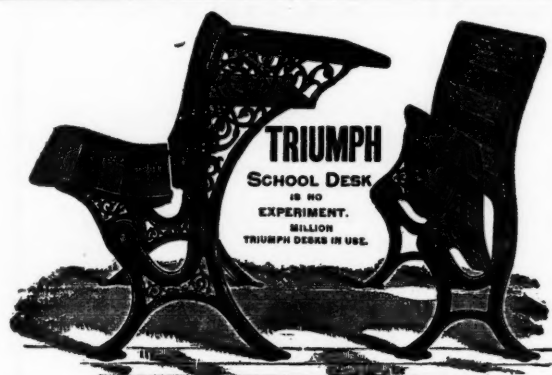
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The Open Court

A MONTHLY MAGAZINE

VOL. XV. (No. 2)

FEBRUARY, 1901.

NO. 537.

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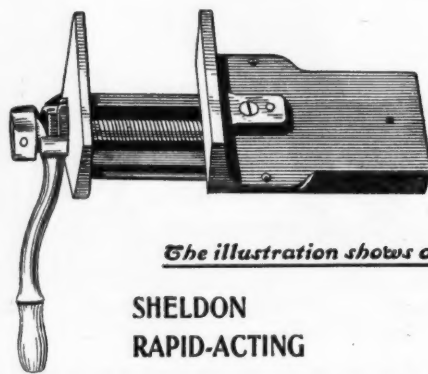
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Interesting Notes.

Bryan's New Paper.

William J. Bryan has begun the publication of a weekly paper at Lincoln, called the *Commoner*. It serves as a medium thru which Mr. Bryan discusses political, social, industrial, and financial questions. He has chosen the weekly form as giving opportunity for more thoughtful and better-considered articles than a daily. He says he has long had the idea and even the name of the publication in mind.

The Tunneling Craze.

For some occult reason the idea of tunneling beneath straits or estuaries possesses a strong fascination for a not inconsiderable section of the public. We are all familiar with the proposed English

Channel tunnel, which for half a century or more has been a favorite theme of the financial promoter; and the proposed tunneling beneath the Irish Channel has been brought persistently into prominent notice, in spite of the fact that it is manifestly doomed to failure as a financial undertaking. The latest tunnel proposal is that of a certain M. Berlier, who believes that if a double track line, twenty-five miles long, were carried beneath the Straits of Gibraltar, at a cost of \$25,000,000, the outlay would be amply justified by the volume of traffic which would pass from continent to continent.

It is positively amusing to note the naïvete with which this gentleman assures the public that, as the depth of the sea at this point does not exceed something over a thousand feet, the construction would be perfectly feasible. Apart from the fact

that from 160 feet to 180 feet is the limit beyond which it is impossible to carry on excavation under the compressed air system, a consideration which alone would prevent the construction of such a tunnel, there is the fact that the excessive grades which would be necessitated by the depth of the tunnel would render the cost of the operation abnormally high. This cost, taken with the heavy fixed charges, would render the scheme a losing venture from the very outset.—*Scientific American*.

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Vici

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Interesting Notes.

The Gulf Stream.

The Gulf Stream has lately been made the subject of study of many nations. It has long been known that this river of tropical water modifies the climate of Iceland so as to make that island inhabitable, and that the British Isles and Norway are indebted to it for milder temperatures than they are entitled to by their latitudes. Norwegian scientists have lately been making some experiments in the interest of the fisheries industry to determine if the influence of the Gulf Stream varies with the season. It has been found that in late winter the Arctic waters are able to submerge the Gulf Stream in the neighborhood of Iceland, but that the warmer water comes to the surface again in the neighborhood of the Shetland islands. This secures open water around Norway, while Greenland in the same latitude is closed in for months by ice.

Laying East River Bridge Cables.

The four big cables which will hold up the new suspension bridge over the East river in New York, will be each 19 inches in diameter, will consist of over 10,000 steel wires, and weigh about 1,100 tons. The method of laying them is as follows: Coils of wire whose ends have been fastened to the anchorages on one bank or the other, are put on reels which travel back and forth across the river because they are fastened to an endless wire rope belt driven by a steam engine. Every trip each reel lays behind it two wires, something as a spider spins a web. While men are fastening two wires just brought across, the reel returns to the other bank with two wires. The wires carried in the same direction are tied into a strand as soon as they number 282. With a traveling rope for each cable, eight strands are thus made at the same time. Each strand has a loop at the end which is hooked over casting called a cable shoe. When the strands are finished they are joined into a cylindrical cable by large steel clamps. The floor of the bridge is also suspended from these clamps.

California Illustrated.

Copy of the illustrated monthly, *The Chicago 400*, a journal of travel and topics, reaches us by the courtesy of the Chicago & Northwestern Ry. It is one of the finest illustrated publications that we have ever seen. The tinted half-tones rival those of the finest magazines, and the letter-press of the whole edition is as perfect as that of any publication ever issued, pictorially and descriptively mirroring California's wonderful scenery. Copy will be mailed to your address upon receipt of 2 cents postage by W. B. Kniskern, G. P. & T. A., C. & N. W. R'y., Chicago, Ill.

Literary Notes.

The article on "Travel in the Future," which was one of the brightest in the Brooklyn *Eagle's* series of Twentieth Century articles appearing Dec. 30, 1900, was by Mr. George H. Daniels, general passenger agent of the New York Central railroad. Mr. Daniels is editorially described by the *Eagle* as "one of the most progressive railroad men in the country." Mr. Daniels' forecast of developments in railroading reads like a romance, but they are all destined to be realized.

The long review accorded by the *Outlook* to Dr. Jerome Walker's "Anatomy, Physiology, and Hygiene" has been reprinted in circular form by Allyn & Bacon, publishers of the book. This article is one that deserves to be carefully read by

Forty-Ninth Annual Statement

of

The Massachusetts Mutual Life Insurance Company

Springfield, Mass.

Year Ending December 31, 1900.

Receipts in 1900.

Premiums, - - - - -	\$4,824,529.74
Interest and rents, - - - - -	1,072,635.14
Total receipts, - - - - -	\$5,897,164.88

Disbursements in 1900.

Death claims (less \$10,736.35 reinsurance), and matured endowments, - - - - -	\$1,513,609.50
Surplus returned to policy holders in dividends - - - - -	679,917.42
Surrendered and canceled policies - - - - -	358,692.00
Total payments to policy holders, - - - - -	\$2,552,218.92
All other disbursements, - - - - -	1,202,731.44
Total disbursements, - - - - -	\$3,754,950.36

Assets (Market Value).

First mortgage loans on real estate, - - - - -	\$10,183,402.39
Loans secured by assignment of Company's policies, - - - - -	2,304,736.07
Stocks and bonds, - - - - -	10,408,289.89
Real Estate (ledger value), including home office building, - - - - -	591,205.71
Premium notes on policies in force, - - - - -	725,101.63
Deferred premiums and premiums in course of collection (reserve charged in liabilities), Net - - - - -	674,210.37
Interest and rents due and accrued (due, \$7,260.62; accrued but not due, \$363,306.81), - - - - -	370,567.43
Cash on hand and in banks, - - - - -	988,108.55
Total assets, - - - - -	\$26,245,622.04

Liabilities.

Reserve, Actuaries' 4 per cent., - - - - -	\$23,418,032.00
Reported death losses and matured endowments in process of adjustment, - - - - -	134,844.00
Balance of installment policy death claims not yet due, - - - - -	183,926.10
Unpaid dividends, due and to become due - - - - -	172,333.76
Premiums paid in advance, - - - - -	11,850.67
Total liabilities, - - - - -	\$23,920,986.53
Surplus, December 31, 1900, - - - - -	\$2,324,635.51

Number of policies issued in 1900, 10,106; insuring \$22,353,050.00

Number of policies in force December 31, 1900, 57,324;

insuring (including reversionary additions), \$136,238,923.00

Gain in insurance in force for the year 1900, \$12,258,485.00

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ASSETS, - - - - -	\$30,928,331.52
Reserves and all other Liabilities, - - - - -	26,385,204.71
Excess Security to Policy Holders, - - - - -	4,543,126.81

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every educator who is interested in the question of the teaching of the effects of alcohol and narcotics. It gives a sound, sane statement of the objections to the laws of New York state and other states which prescribe closely the method and content of physiology teaching.

The February *Century* contains the prize story in the *Century's* third annual college competition. "An Old World Wooing," and the author is Adeline M. Jenney, B. A., of the University of Wisconsin. "At Third Hand," is by Mr. Howells. "Some Americans Abroad," by Charles Battell Loomis, Henry Holcomb Bennett's "A Council of Six," "The Steer with the Marked Hoof," by Walter Armsby, Chester Bailey Fernald's "The Lannigan System with Girls," "The Play Devil," by Earle Ashley Walcott, "The Women," by Ruth McEnery Stuart, A doctor's story, by Lily A. Long, "The Helmet of Navarre," by Bertha Runkle, and Hamlin Garland's "Her Mountain Lover," are only part of the good things.

Richard Boughton's "Humor and Pathos of the Savings Bank," Besant's paper on "The Helping Hand in East London," Professor Thurston's "The Steel Industry of America," "A Remarkable American," by Prof. F. N. Thorpe in his sketch of the late Dr. William Pepper, "The People at the top of the World" by Jonas Stadling. Mrs. Amelia Gere Mason asks "Is Sentiment Declining?" and Mrs. Rebecca Harding Davis writes of "An English Passion Play."

The Massachusetts Mutual Life Insurance Company, of Springfield, has issued its forty-ninth annual statement. Another year will bring around the fiftieth anniversary of this stable company. The value of careful, conservative methods in life insurance is nowhere better shown than in the history of the Massachusetts Mutual. Very few changes have occurred in the official management, but four presidents, six vice-presidents, five secretaries and two actuaries having held office since the date of the charter.

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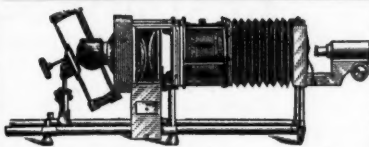
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The Publishers' Desk.

Mr. and Mrs. A. H. Gates, writing to the Bartlett Tours Company, say: "Replying to yours September 19, beg to say it gives us much pleasure to add a word of commendation in behalf of your company. The trip this summer to Europe with your company, was a trip which we anticipated with much pleasure, and we can say that our expectations were more than realized. With good attention, good guides, good hotels, and many pleasant carriage rides, not expressed in your itinerary we feel that we received all and more than you promised."

"Should we take another European trip, which we expect some time, we would think of no other Tours Company, especially if we could have the company of the present secretary, Mr. J. W. Althouse."

Seen and Heard.

For some time, a bright newspaper man, Louis N. Megargee, has been contributing articles to the Philadelphia *Times* under the title of "Seen and Heard in Many Places." These have been of so bright and original a nature that they have attracted wide attention. The essays dealt with political, social, and other matters.

So well were they received that Mr. Megargee has been encouraged to launch out for himself. We have before us the first volume of a little weekly magazine called *Seen and Heard*; filled with essays similar to those that have adorned the columns of the *Times*. It appears like an attempt to get back to that personal journalism that first became noted thru Addison and Steele.

Many a bright journalist has longed to get away from the modern newspaper monster that devours his talents and his best energies and gives him no adequate reputation in return. The charm of such a publication as *Seen and Heard* is that we can imagine ourselves talking face to face with the editor. We wish his magazine success. It is published at 801 Walnut street, Philadelphia.

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